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Annual Report 1977

Hudson's Bay Oil and Gas Company Limited





HUDSON'S BAY OIL AND GAS COMPANY LIMITED 1977 ANNUAL REPORT

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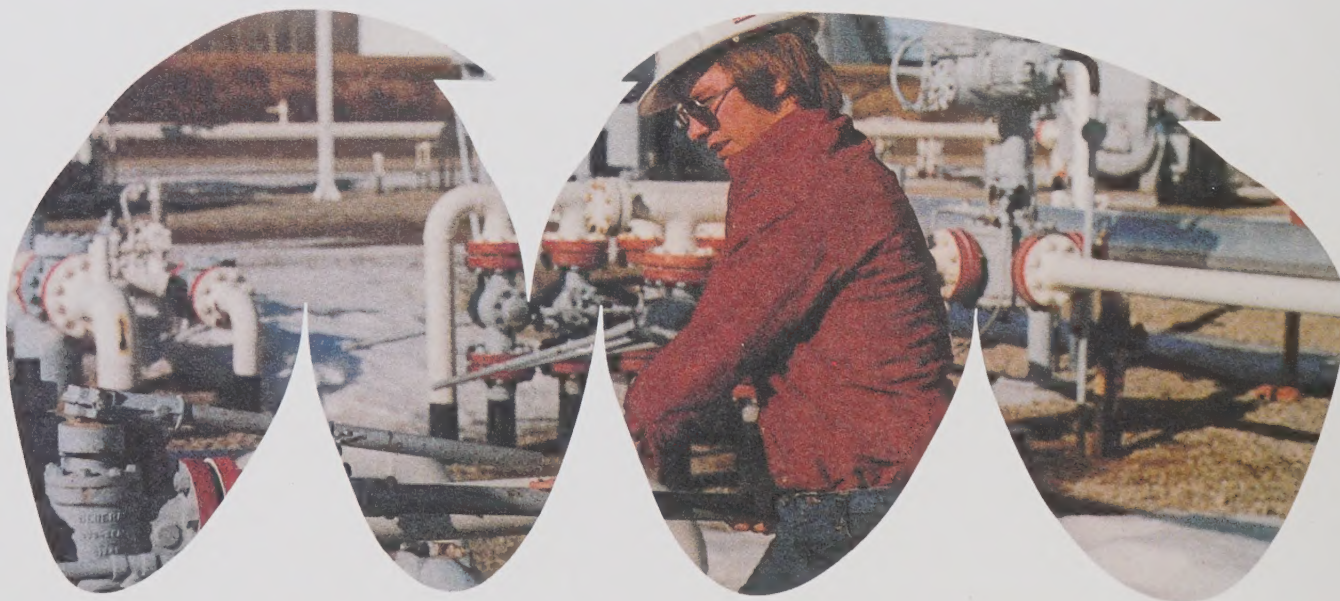
ANNUAL MEETING OF SHAREHOLDERS

The Annual Meeting of Shareholders will be held at the Calgary Convention Centre, 110 Ninth Avenue S.E., on April 25, 1978 at 11:30 a.m.

ABOUT THE COMPANY

Hudson's Bay Oil and Gas Company Limited has been engaged in exploring for and developing hydrocarbons in Canada for over fifty years and is a major producer of crude oil, natural gas and gas related products. Since 1973, petroleum exploration activities have been carried on outside of Canada and the Company now has interests in exploratory properties in nine other countries and in crude oil production in Indonesia. Other activities in Canada include the transportation, purchase and sale of crude oil, natural gas liquids and sulphur. The Company also is active in coal and mineral exploration and has interests in oil sands and petrochemical developments.

At year end 1977, the Company had 18,983,272 common shares outstanding. Continental Oil Company, a United States based corporation, held 52.9% and Hudson's Bay Company, a Canadian corporation, held 21.1%. The remaining 26.0% was held by 8,401 public shareholders. Nearly 84.3% of the publicly held shares are owned by Canadians and, in total, Canadian shareholders own 43.0% of the common shares outstanding.



FINANCIAL AND OPERATING HIGHLIGHTS

	1977	1976	Increase (Decrease) Percent
FINANCIAL — Millions of dollars, except per share amounts			
Total Revenues.....	\$546.4	\$409.1	33.6
Royalties and Provisions for			
Income and Other Taxes	\$285.9	\$206.7	38.3
Net Earnings.....	\$ 98.9	\$ 78.7	25.8
Per Common Share.....	\$ 5.22	\$ 4.15	25.8
Funds Generated from Operations.....	\$189.0	\$140.1	34.9
Per Common Share.....	\$ 9.97	\$ 7.39	34.9
Dividends Declared			
Per Common Share.....	\$ 1.54	\$ 1.43	7.7
Capital Expenditures and			
Exploration Expenses	\$130.6	\$105.0	24.4
Working Capital.....	\$ 78.0	\$ 46.0	69.5
Long Term Debt.....	\$ 62.0	\$ 81.8	(24.2)
Shareholders' Equity.....	\$407.8	\$338.1	20.6

OPERATING

(see footnote)

Crude Oil and Natural Gas Liquids Production			
— Barrels per day	80,888	70,033	15.5
Natural Gas Sales — Millions of cubic feet per day	408.7	417.9	(2.2)
Sulphur Sales — Long tons per day.....	1,180	757	55.9
Pipe Line Throughput — Barrels per day.....	112,093	113,191	(1.0)
Drilling Activity — Gross wells.....	671	400	67.8
— Net wells.....	309.8	190.2	62.9
Oil and Gas Rights — Thousands of net acres at year end	21,268	18,266	16.4
Reserves — At year end			
Crude Oil and Natural Gas Liquids			
— Millions of barrels	283.3	306.3	(7.5)
Natural Gas — Billions of cubic feet	3,380	3,374	.2
Sulphur — Thousands of long tons	7,304	7,873	(7.2)

Note: Throughout this report the Company's hydrocarbon production, sales and reserves volumes are reported on the basis of its ownership interests before deducting royalties, which are deemed to include participating interests of host governments.

DIRECTORS' REPORT



S. G. Olson
President and Chief Executive Officer

1977 REVIEW

In 1977 the Company again recorded substantial improvements in financial results with higher levels of revenues, funds generated from operations and net earnings. These financial gains were mainly due to improvements in Canadian crude oil and natural gas prices, together with a major addition to crude oil production from properties in Indonesia purchased at year end 1976. Additions to reserves from drilling and development programs slightly more than offset natural gas produced during the year but fell short of replacing the production of crude oil and natural gas liquids.

FINANCIAL AND OPERATING RESULTS

Net earnings for 1977 were \$98.9 million or \$5.22 per common share, an increase of 25.8% over 1976 earnings of \$4.15 per common share. Funds generated from operations advanced by 34.9% to \$189.0 million or \$9.97 per common share compared with \$7.39 per share in the prior year. Dividends totalling \$1.54 per common share were declared during the year, an increase of 11 cents per share over 1976. The return on total capital employed amounted to 17.3% compared with 15.2% for the prior year while the return on shareholders' equity rose to 26.5% from 25.2%.

Total net revenues increased by 29.7% to \$369.4 million. This substantial advance in revenues is chiefly the result of government controlled price increases in

Canada and the Company's first year of crude oil production from Indonesia. The growth in revenues from Canadian operations of \$58.1 million was augmented by \$26.6 million in new foreign revenues.

Production of crude oil and natural gas liquids rose by 15.5% to average 80,888 barrels per day. The major increase came from operations in Indonesia where crude oil production averaged 9,841 barrels per day. Another factor was an advance of 1.4% to 70,981 barrels per day in Canadian production as a result of increased market demand for heavy crude oil and the addition of new sources of production in Alberta. Those production gains, however, continued to be eroded by declining productivity in older fields. Sales of natural gas of 408.7 million cubic feet per day were 2.2% below the previous year, with a substantial reduction in demand for deliveries from established fields largely offset by sales from new sources of production that were brought on stream during the year.

EXPLORATION AND DEVELOPMENT

In 1977, capital expenditures and exploration expenses totalled \$138.1 million before deducting \$7.5 million in exploration incentives reimbursed by the Alberta government. These total outlays were \$27.4 million greater than the comparable expenditures in 1976.

For petroleum exploration in Canada only, expense and capital investments totalled \$60.8 million compared with \$40.7 million in 1976. The Company participated in the drilling of 131 exploratory wells, of which 57 were successfully completed as oil or gas wells. Exploration conducted in countries outside of Canada involved expenditures totalling \$16.5 million, versus \$9.9 million in 1976. In these areas, the Company participated in the drilling of 18 exploratory wells which resulted in one discovery and two extensions of prior finds. Foreign exploration activity was conducted in the Norwegian, Netherlands and United Kingdom sectors of the North Sea, and in Indonesia, Greenland, Ireland and the United States, and acreage was acquired in Australia and Egypt.

Capital spending in Canada for development drilling and other production facilities totalled \$48.1 million, virtually all of which was expended in Alberta. Development drilling costs of \$25.1 million were 48% higher than in the prior year and involved participation in the drilling of 500 wells, a significant achievement for the Company. New investment in gas plants and related facilities of \$16.5 million was 11.4% below the 1976 outlays. Foreign production expenditures in 1977 totalled \$2.5 million, essentially all of which was spent in Indonesia.

In a continuing effort to diversify its operations, the Company spent \$6.5 million on the investigation of

new business opportunities during 1977. Exploration for coal and minerals was expanded, exploration for uranium was resumed, and opportunities to purchase coal and mineral properties which are either producing or under development were evaluated. The Company is a participant in two experimental projects to test in situ recovery methods for heavy oil, is participating in a study of heavy oil upgrading facilities, and is a member of a group which is investigating the feasibility of a condensate-based petrochemical plant in Alberta.

Protection of the environment continued to be of prime importance in all activities of the Company. Existing facilities are subject to constant monitoring and upgrading, and each new investment project receives a thorough environmental review early in the planning stage.

PLANS FOR 1978

The Company will continue an aggressive exploration and development program in 1978, with expenditures expected to be in excess of \$150 million. Outlays for oil and gas exploration will be the largest in Company history, with approximately three-quarters to be spent in Canada and the remainder to be invested in other countries. The major share of Canadian activity will be in Alberta with emphasis on deep tests in the Foothills/Deep Basin areas, and in the Whitecourt block. Lands in the heavy oil areas of Saskatchewan and natural gas prospects in British Columbia also will be drilled. Outside of Canada, exploration will continue on the Southeast Sumatra block, and joint-venture activities are planned for six other countries. Following the 1977 acquisition of a 40% interest in a large acreage block offshore from northwestern Australia, an office has been established in Perth from which the Company will act as operator for the first time in a major foreign exploration program.

Development programs planned for 1978 call for expenditures of about \$55 million, most of which will be spent in Canada. A major portion of the outlays will be devoted to development drilling in Alberta. Approximately 400 development wells will be drilled with Company interests equivalent to about 200 net wells. Funds also will be committed to expand and improve existing production, processing and enhanced recovery facilities.

The minerals, uranium and coal exploration programs will continue in 1978. A pilot project for in situ recovery of oil sands at Cold Lake will commence during the second quarter, and laboratory work will be continued to investigate the recovery of bitumen from Athabasca oil sands. In addition, the Company will examine the feasibility of participating in an oil sands

mining project and, with its partners, will decide whether to proceed with the petrochemical project which has been under study.

INDUSTRY REVIEW AND OUTLOOK

The highlight of 1977 for the Canadian petroleum industry was the vigorous pace of exploration activity. The industry operated at record levels under the impetus of rising prices and the attendant improvement in cash flows, and the discovery of new reserves of oil and gas. While most of the investment was made in Alberta, the thrust of exploration extended into British Columbia and to the heavy oil lands in Saskatchewan. The enthusiasm evident in the western provinces was in direct contrast to the decline in activity in the far north and east coast frontier exploration areas. There are a number of political factors which play a major role in this decline: the industry still does not know when frontier reserves can be placed on stream, how exploration on federal lands will be administered, or when the east coast jurisdictional dispute will be settled. Until these factors are resolved, activity probably will continue to be preferentially directed to western Canada where the large outlays that are necessary for participation in the new, highly competitive oil and gas plays are likely to reduce the funds available for frontier programs.

Industry expenditures in 1977 to acquire oil and gas rights in western Canada were over \$700 million, more than three times greater than the \$200 million spent in 1976. This provides a strong indication that exploration will be maintained at a high level for the next few years. There appears to be a growing awareness on the part of governments of the need to maintain an environment which encourages exploration. Favourable success ratios, moreover, appear to have confirmed industry's confidence in the potential for the discovery of new hydrocarbon reserves.

The Canadian petroleum industry produced 1,445,000 barrels per day of crude oil and condensate during 1977, fractionally higher than in the prior year. The outlook for 1978 is for a further modest increase in production. The National Energy Board is proceeding with its scheduled reduction of crude oil exports to the United States, but the projected decline in 1978 is likely to be offset by modest demand growth in western Canada and larger increments of demand in eastern Canada which will result from new crude oil based petrochemical applications in Ontario and expanded deliveries of domestic crude oil to refiners in Montreal.

Sales of Canadian natural gas averaged 6.6 billion cubic feet per day in 1977, having increased by approximately 4.0% over the prior year. The outlook for 1978

is for overall growth in sales of nearly 3%, although more rapid growth would result if deliveries of volumes licensed for long term export were accelerated to meet the growing need for gas supplies in the United States.

During 1977 the reference price of 42° gravity crude oil in Edmonton increased by 70 cents per barrel on January 1 and by \$1.00 per barrel on July 1, resulting in a year end price of \$11.18 per barrel. A further increase of \$1.00 per barrel became effective on January 1, 1978 and the announced schedule for future increases calls for further increments of \$1.00 per barrel on July 1, 1978 and January 1, 1979. The price of Alberta natural gas referenced in Toronto rose by 10.5 cents per thousand cubic feet on January 1 and by 17.5 cents per thousand cubic feet on August 1, bringing the 1977 year end price to \$1.68. On February 1, 1978, a further increment brought the price to \$1.85 per thousand cubic feet. Natural gas prices are likely to advance in concert with those for crude oil but the realization of scheduled price increases for both products may depend on the government's ongoing assessment of world crude oil pricing trends and Canada's overall economic condition.

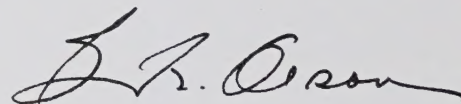
DIRECTORS

At the 1977 Annual Meeting of Shareholders, two new Directors were elected to replace Directors who had retired or did not stand for re-election. In addition, a by-law was sanctioned increasing the size of the Board by one Director. The Board extends to retired Directors D. C. Jones and A. W. Tarkington its recognition and appreciation for their strong leadership and counsel which contributed to the growth and stature of the Company. Both men had served as Chairman of the Board and Mr. Jones, who joined the Company in 1954, was President for seven years. The new Directors elected were Messrs. R. F. Haskayne and G. J. Maier, both of whom are Executive Vice-Presidents of the Company, and Mr. S. Schwartz, Senior Vice President of Continental Oil Company.

* * *

The encouraging results for the year could not have been achieved without the diligence and creativity of the nearly 1,400 employees. The Directors extend to them their sincere thanks.

Submitted on behalf of the Board of Directors
February 10, 1978, Calgary, Alberta



The Cabin Creek well, drilling in the Alberta foothills, will reach a depth of more than three miles.

GENERAL REVIEW



PETROLEUM EXPLORATION

GENERAL

During 1977, petroleum exploration expenditures including both capital and expense items totalled \$77.3 million, an increase of \$26.7 million over 1976. Exploratory outlays in Canada, before deducting provincial incentive credits, were \$60.8 million, 50% higher than comparable amounts in 1976. Expenditures outside of Canada increased by 66% to \$16.5 million.

PETROLEUM EXPLORATION

	1977	1976
	(Thousands of dollars)	
Canada		
Acreage expenditures	\$13,135	\$ 8,083
Drilling expenditures	31,230	18,481
Exploration expenses	16,438	14,106
	60,803	40,670
Foreign		
Acreage expenditures	510	269
Drilling expenditures	11,946	7,669
Exploration expenses	4,015	1,989
	16,471	9,927
Total expenditures	77,274	50,597
Canadian incentive credits ...	(7,544)	(5,709)
Net expenditures	\$69,730	\$44,888

CANADIAN PETROLEUM EXPLORATION

Canadian petroleum exploration expenditures in 1977 were directed principally toward the acquisition and evaluation of prospects in Alberta, with smaller amounts spent in British Columbia, Saskatchewan, the Arctic Islands, and the East Coast. In addition, an estimated \$12.0 million was spent in 1977 by other companies drilling exploratory wells under farmout arrangements to earn interests in Company lands.

The Company participated in 131 gross exploratory tests in 1977, including 31 wells drilled by others at their cost under farmout agreements. On a geographi-

CANADIAN EXPLORATORY WELLS

	1977		1976	
	Gross	Net	Gross	Net
Oil	15	12.5	6	2.9
Gas	42	19.7	42	15.2
Dry	74	40.4	46	20.1
Total	131	72.6	94	38.2
Average Depth	6,854 feet		6,740 feet	



G. J. Maier, Executive Vice-President, is responsible for the operating departments of the Company.

cal basis, 115 of these tests were located in Alberta, six in British Columbia, six in Saskatchewan and four in the Arctic Islands.

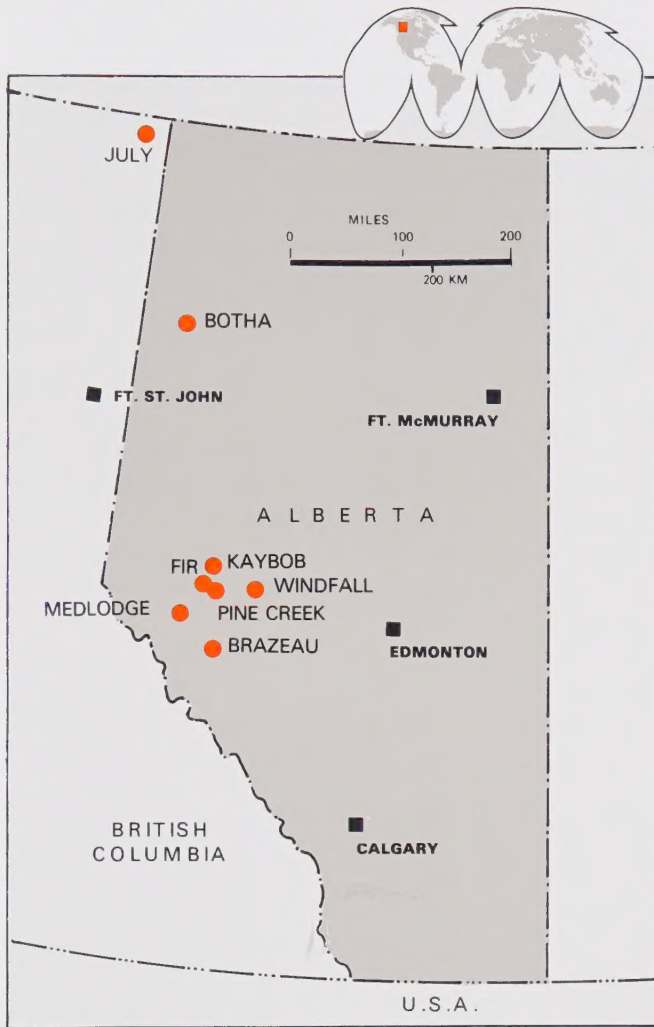
The 1977 exploratory drilling program resulted in 57 oil and gas discoveries or extensions. The ultimate potential of these successful wells will not be known until additional drilling is carried out, but the more prospective discoveries and extensions are shown in the accompanying map and table. The remaining discoveries and extensions are of lesser importance due to limited prospects for development of significant reserves or because the Company's interest is small.

DISCOVERIES AND EXTENSIONS IN 1977

Name of Field or Area	Number	Nature	Approximate Depth
British Columbia			
July	1	Gas	6,900'
Alberta			
Botha	1	Gas	7,600'
Kaybob South	2	Gas	7,700'
Windfall	1	Gas	8,800'
Pine Creek	1	Gas	8,800'
Fir	1	Gas	9,200'
MedLodge	1	Gas	12,100'
Brazeau River	1	Gas	10,200'
Lloydminster	11	Oil	2,200'
Lloydminster	4	Gas	2,200'

A high level of exploratory drilling was continued in west-central Alberta throughout 1977 with emphasis on the prolific West Whitecourt area where substantial exploratory expenditures were incurred. The discoveries and extensions at Kaybob South, Windfall, Fir,

● 1977 DISCOVERIES

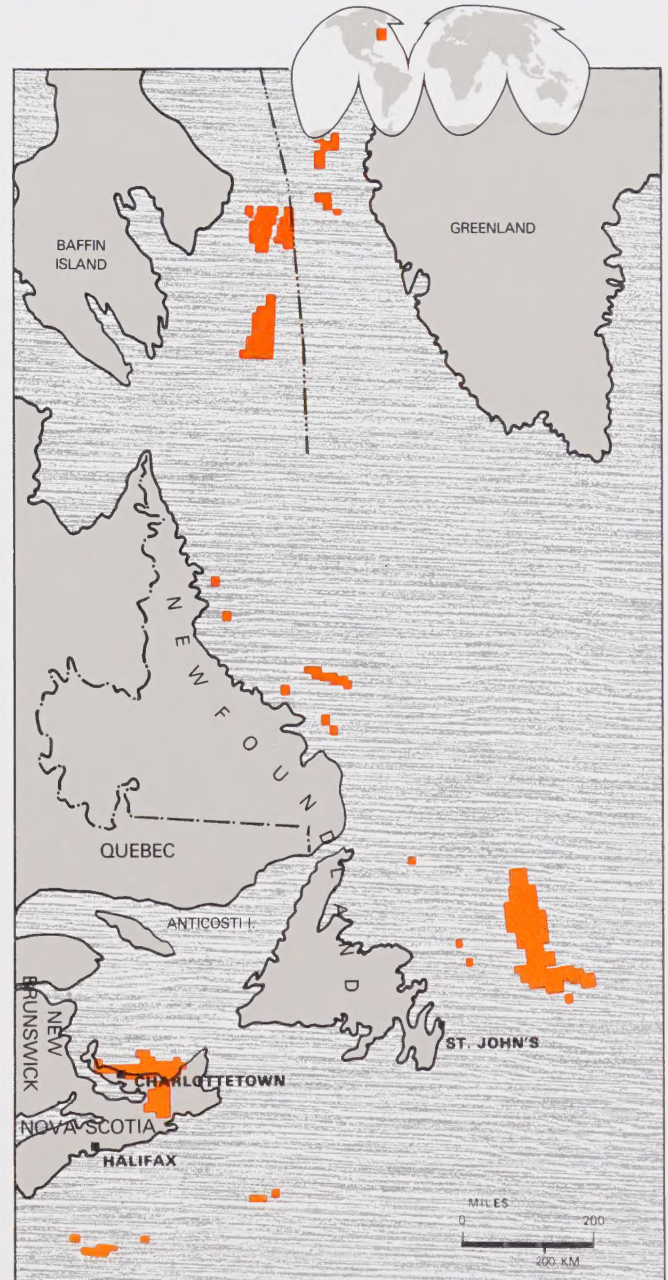


Pine Creek, MedLodge and Brazeau River are located in this region where the Company has extensive holdings. Potentially significant discoveries also were made at Botha in northwestern Alberta and in the July area of northeastern British Columbia.

The Company is active in the new deep Devonian oil and gas play in the West Pembina-Brazeau area and during the year eight wells were started. Of these, one was a Nisku gas discovery, one was a dry hole and six were drilling at year end.

In order to meet a growing demand for heavy crude oil, a drilling program was initiated on the Company's large holdings of prospective lands in the Lloydminster area of east-central Alberta. Of the 26 wells

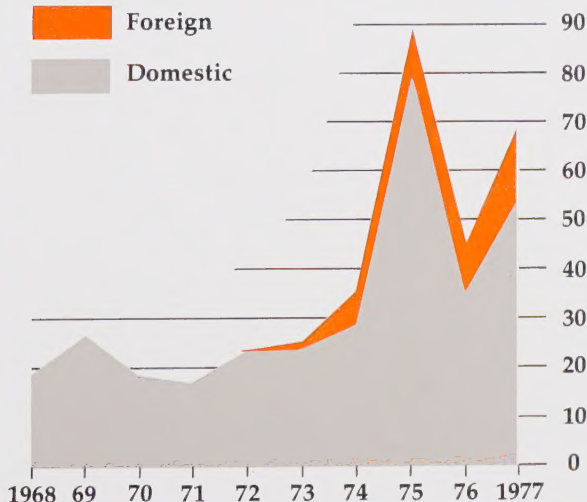
■ LANDHOLDINGS — EAST COAST OF CANADA



PETROLEUM EXPLORATION EXPENDITURES

Millions of dollars

■ Foreign
■ Domestic



drilled under this program in 1977, 11 were completed as oil wells, 4 were gas wells and 11 were dry holes.

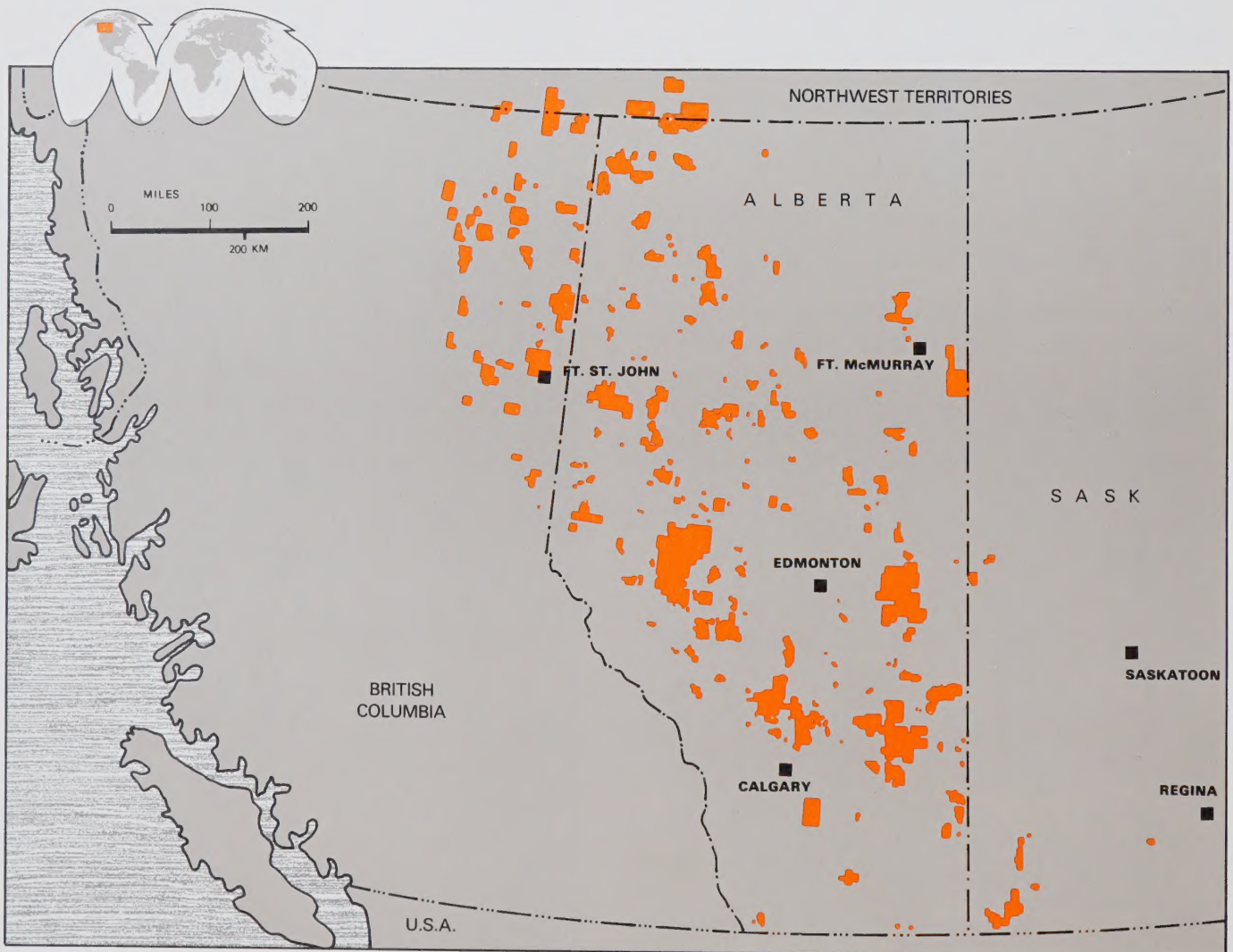
The first Company-operated well in the Arctic Islands commenced drilling in November, 1977. The well, located twelve miles east of the Panarctic King Christian natural gas discoveries, is being directionally drilled from Ellef Ringnes Island to test a very large offshore structure that straddles an 82,000 acre block in which the Company holds a 50% interest.

During 1977, a total of 667,000 net acres of petroleum and natural gas rights were acquired, of which 188,000 acres were purchased at a cost of \$13.1 million and 479,000 acres were obtained through other types of acquisitions that did not require bonus payments. More than 90% of the expenditures and 33% of the acreage acquired were in the province of Alberta, primarily in the west-central region where an active drilling program will be continued.

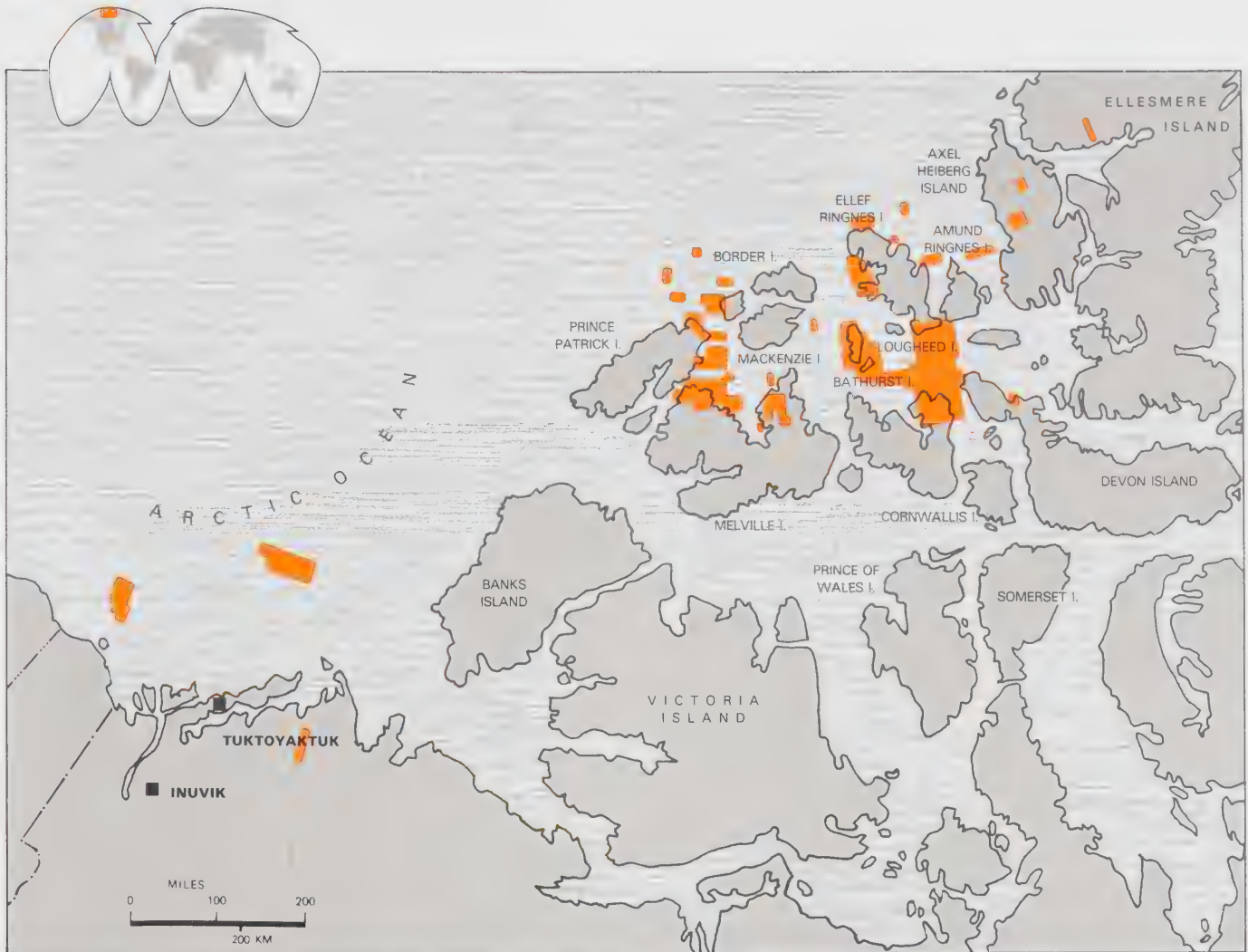
During the year, interests in 1.6 million acres of Canadian petroleum and natural gas rights were surrendered or released. The largest single surrender was from a 5.1 million acre block in the Davis Strait, where seismic evaluation on 1.1 million acres failed to identify any promising structures and prompted their release. An additional 256,000 acres reverted to governments under land tenure regulations on conversion of permits and reservations to lease status. Interests equivalent to 111,000 net acres were assigned to other companies under farmout agreements as consideration for drilling on Company lands and 97,000 acres were internally transferred to a developed category.

Year end holdings of undeveloped petroleum and natural gas rights in Canada totalled 14.5 million net acres and the associated acquisition cost totalled \$132.7 million. Rental payments in 1977 amounted to \$3.3 million and mineral taxes on undeveloped freehold acreage were \$394,000.

■ LANDHOLDINGS — WESTERN CANADA



■ LANDHOLDINGS — ARCTIC ISLANDS



This rig, on Ellef Ringnes Island in the Canadian Arctic, is drilling directionally to test a large offshore structure underlying Cape Allison.



FOREIGN PETROLEUM EXPLORATION

The Company continued to expand its foreign exploration program in 1977 with expenditures of \$16.5 million, an increase of \$6.5 million over the prior year. At year end, acreage interests were held in nine countries, and exploratory activities were carried out in seven countries during the year. Drilling expenditures were \$11.9 million compared with \$7.7 million in 1976, reflecting an increase in the number of wells drilled as well as the payment of a disproportionate share of the cost of two Norwegian offshore exploratory tests in order to earn acreage interests.

The exploratory drilling program consisted of participation in 18 wells, of which two were successful oil wells offshore from Indonesia and one was a confirmation gas well drilled near a 1975 discovery offshore from the United Kingdom.

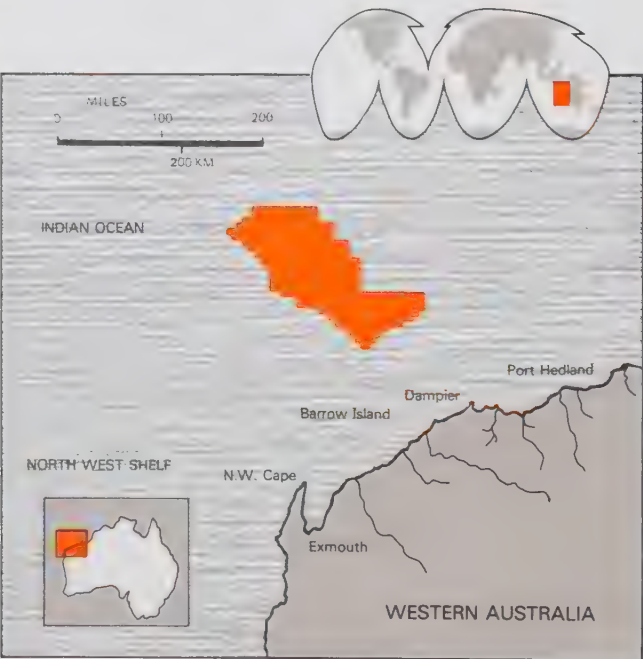
FOREIGN EXPLORATORY WELLS

	1977		1976	
	Gross	Net	Gross	Net
Oil.....	2	0.2	—	—
Gas.....	1	0.1	1	0.2
Dry.....	15	2.5	11	2.5
Total.....	18	2.8	12	2.7
Average Depth.....	7,833 feet		10,174 feet	

Australia

The Company is a 40% participant in a group of Canadian and Australian companies which was awarded an eight million acre licence on the highly prospective Australian northwest continental shelf. The Company

LANDHOLDINGS — AUSTRALIA



LANDHOLDINGS — INDONESIA



is operator for the group and has established an office in Perth to conduct the necessary work program. A seismic survey will be carried out in 1978 and exploratory drilling will begin in 1979.

Indonesia

Seven exploratory wells were drilled on the Southeast Sumatra contract area in the Java Sea where an 8.66% interest in 16.3 million acres is held. A significant flow of crude oil was tested at one of the wells and follow-

The Company's seismic crew uses this vibrator unit to help locate potential oil and gas bearing formations.



up drilling has indicated the possibility of a commercial field.

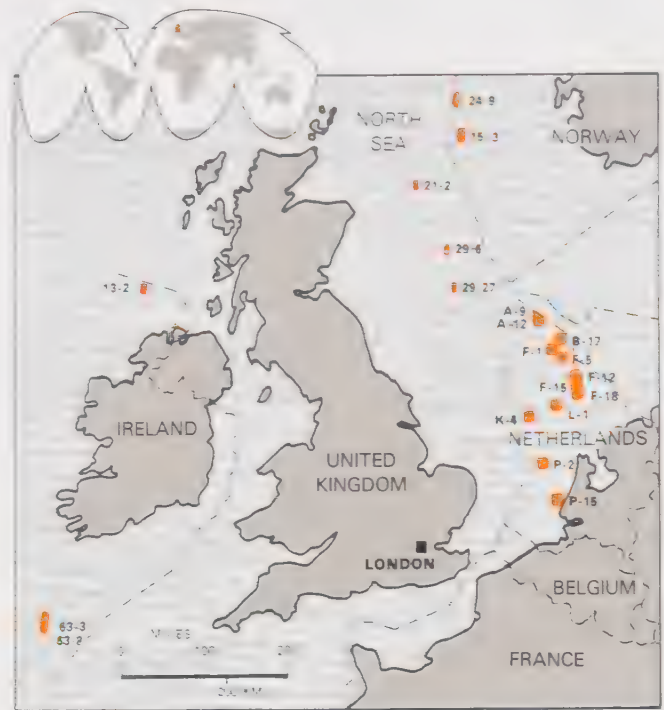
The Company's interest in the 1.3 million acre Kakap block in the South China Sea increased from 16 $\frac{2}{3}$ % to 50% with the withdrawal of two participants. A subsequent farmout to a new partner will reduce the Company's interest to 33 $\frac{1}{3}$ %. Two unsuccessful exploratory wells were drilled on this large block in 1977, but there are still a number of prospective areas to explore and it is expected that another well will be drilled during 1978.

North Sea

In the Netherlands sector of the North Sea, where the Company holds an average interest of 11.1% in 1.1 million acres, one unsuccessful exploratory well was drilled during 1977. A well currently is being drilled on block P/15 and more drilling is planned for 1978. In addition, an earlier oil discovery on block F/18 will be studied to determine the feasibility of a delineation and development program.

In the Norwegian sector, a farmin agreement was concluded whereby the Company acquired a 15% interest

LANDHOLDINGS — NORTH SEA AND IRELAND



An exploratory well is being drilled in the Southeast Sumatra contract area offshore from Indonesia



in a 99,000 acre licence covering block 15/3. The 1977 program on the block involved the deepening of a suspended 1976 test but the well was abandoned after technical difficulties prevented the testing of several shows of hydrocarbons in the deeper zones. Additional drilling will be carried out in 1978 or 1979.

Also in the Norwegian sector, a 16²/₃% interest in the 93,000 acre block 24/9 was earned by means of a farm-in. An exploratory test in 1977 was unsuccessful and further drilling will be contingent upon the outcome of a seismic program to be conducted in 1978.

On block 21/2 in the United Kingdom sector of the North Sea, where the Company holds a 5% interest in 167,000 acres, an exploratory well confirmed the presence of a productive gas sand originally discovered by a well drilled in 1975. Further drilling is planned during 1978 to evaluate the extent of the productive area.

Other Areas

Negotiations were concluded for the acquisition of a

33¹/₃% interest in approximately 900,000 acres in the Sinai area of Egypt. A portion of this area is included in the buffer zone between Egypt and Israel and, consequently, no exploration program can be initiated until the area becomes politically stable.

An unsuccessful exploratory well was drilled offshore from Greenland on the one million acres in which a 20% interest is held. As a result of this well and the equally unfavourable drilling results experienced by other concession holders, exploratory activity has been discontinued and the concessions will be relinquished.

An unsuccessful exploratory well was drilled off the south coast of Ireland on the 189,000 acre block in which the Company holds a 15% interest. Further exploration is contingent upon the outcome of geological studies currently in progress.

In the United States, three unsuccessful joint venture tests were drilled in Oklahoma, while a deep exploratory well in Wyoming was drilling at year end.

UNDEVELOPED PETROLEUM AND NATURAL GAS RIGHTS

Gross and Net Acreage Holdings (Thousands of acres)

As at December 31, 1977 (1)

	Crown Reservations and Permits (2)		Leases		Freehold Lands (3)		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Canada								
Alberta	947	572	4,174	2,335	1,319	1,319	6,440	4,226
British Columbia	922	493	781	383	6	6	1,709	882
East Coast (4)	6,125	2,396	—	—	—	—	6,125	2,396
Northwest Territories (including Arctic Islands and Baffin Offshore)	12,181	5,358	746	607	—	—	12,927	5,965
Manitoba	—	—	29	29	128	128	157	157
Saskatchewan	—	—	180	87	740	740	920	827
Total Canada	<u>20,175</u>	<u>8,819</u>	<u>5,910</u>	<u>3,441</u>	<u>2,193</u>	<u>2,193</u>	<u>28,278</u>	<u>14,453</u>
Foreign								
Australia							8,000	3,200
Egypt							890	297
Greenland							1,000	200
Indonesia							17,577	2,050
Ireland							189	28
North Sea — Netherlands							1,131	126
— Norway							192	30
— United Kingdom							167	8
United States							30	10
Total Foreign							<u>29,176</u>	<u>5,949</u>
Total							<u>57,454</u>	<u>20,402</u>

- (1) Gross acreage represents the total number of acres in which the Company has a participating interest. Net acreage represents the Company's share of gross acreage calculated in accordance with its various ownership interests.
- (2) Convertible into leases to the extent of approximately 50%.
- (3) Includes 1.9 million acres owned by Siebens Oil and Gas Ltd. on which the Company has exclusive rights until December 31, 1999 to lease any portion of the lands without bonus payment.
- (4) Offshore permits include 2,068,000 gross (1,205,000 net) acres covered by federal but not provincial rights and 641,000 gross (183,000 net) acres covered by provincial but not federal rights.

PETROLEUM PRODUCTION

GENERAL

Petroleum production capital expenditures amounted to \$49.2 million in 1977 compared with \$52.5 million in the prior year. Excluding amounts related to the purchase of producing properties, expenditures were up 25%. This increase was primarily the result of a



This pumping unit, located in the Company-operated Sundre oil field, is the largest type in use in western Canada.

PETROLEUM PRODUCTION

	1977	1976
	(Thousands of dollars)	
Canada		
Development drilling	\$25,082	\$16,949
Plants and related facilities . .	16,462	18,579
Other production facilities . . .	6,553	4,436
	<u>48,097</u>	<u>39,964</u>
Foreign		
Development drilling	1,530	342
Other production facilities . . .	923	29
	<u>2,453</u>	<u>371</u>
Acquisition of producing properties	(1,400)	12,194
Total	<u>\$49,150</u>	<u>\$52,529</u>

much larger development drilling program in Canada and development activity associated with the producing properties in Indonesia.

DEVELOPMENT DRILLING

Expenditures for development drilling in Canada reached \$25.1 million, an increase of 48% over the previous year. The Company participated in the drilling of 500 domestic wells during 1977, the equivalent of 231.4 net wells. Of these net wells, 207.0 were drilled in Alberta, 23.6 in Saskatchewan and 0.8 in British Columbia. Included are 37.0 net wells that were drilled under farmout agreements and involved no cash outlay by the Company.

CANADIAN DEVELOPMENT WELLS

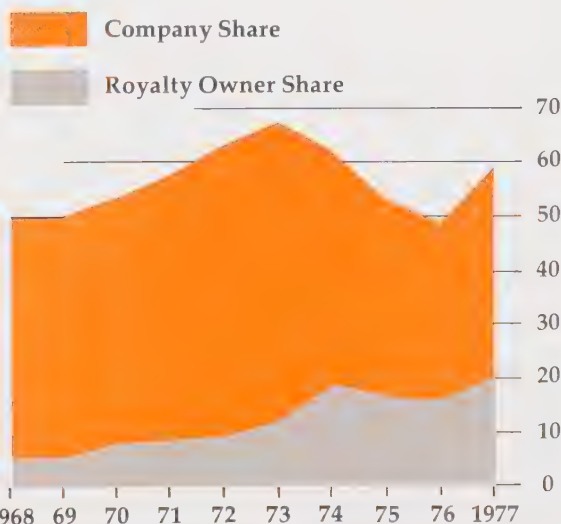
	1977		1976	
	Gross	Net	Gross	Net
Oil	99	64.4	75	43.5
Gas	342	128.0	173	79.0
Dry	59	39.0	41	25.2
Total	<u>500</u>	<u>231.4</u>	<u>289</u>	<u>147.7</u>
Average Depth	2,706 feet		3,080 feet	

The development drilling program resulted in the completion of 64.4 net oil wells and 128.0 net gas wells. Most of the oil wells were in the Wainwright and Lloydminster heavy oil areas and in the Cessford, Sylvan Lake and Twining oil fields. A major portion of the development gas wells were located in the eastern Alberta shallow gas region.

During 1977, an agreement was concluded with Union Gas Company Limited of Chatham, Ontario under

PRODUCTION OF CRUDE OIL

Thousands of barrels per day



which a minimum of \$26 million will be spent over a three year period for drilling on 1.2 million acres of freehold lands under option to the Company. Union Gas will pay 80% of the cost of the first well drilled on each parcel to earn a 40% working interest in those parcels which are productive. Outlays for additional wells on each parcel and all necessary production facilities are shared in the working interest ratio. From the date of the agreement on June 21, 1977, 32 wells were drilled, resulting in eight successful oil wells and ten successful natural gas completions. Most of this drilling was carried out in the shallow gas and heavy oil regions of eastern Alberta.

Foreign development drilling expenditures amounted to \$1.5 million during 1977. Drilling activity consisted of participation in 22 wells, of which 18 were in Indonesia and four in the United States. This resulted in 16 gross (1.4 net) oil completions in the Southeast Sumatra contract area, and three gross (1.1 net) oil completions in Oklahoma.

FOREIGN DEVELOPMENT WELLS

	1977		1976	
	Gross	Net	Gross	Net
Oil	19	2.5	4	1.5
Gas	—	—	1	0.1
Dry	3	0.5	—	—
Total	22	3.0	5	1.6
Average Depth	4,489 feet		6,724 feet	

PRODUCTION FACILITIES

The Zama gas plant came on stream in March and by year end was capable of producing 16 million cubic feet per day. Construction of this plant was completed in 1976 but start-up was delayed by corrosion in the trunk line system used to transport the sales gas.

Six gas processing facilities were completed during 1977, bringing the number of such facilities in which the Company has interests to sixty-seven. The Edson-Viking gas field was tied into the existing plant at Edson and contributed 5.8 million cubic feet per day of new production. The installation of additional compressor facilities at Edson, Gilby and Buick Creek was completed in 1977 and will permit the sale of greater volumes from these locations. Work in progress at year end included expansion of the Brazeau plant and construction of small processing plants at the Tangent and Sundance fields.

Outlays for foreign production facilities were primarily for a production platform which was placed on stream in October in the Southeast Sumatra contract area where the Company holds an 8.66% interest. This

new platform has the capacity to produce 20,000 barrels per day, which brings the production capability in this contract area to nearly 120,000 barrels of oil per day.

CRUDE OIL

Production of crude oil averaged 59,438 barrels per day, an increase of 21% over 1976. The major factor in this increase was 9,841 barrels per day from the Southeast Sumatra contract area offshore from Indonesia in which the Company acquired an 8.66% interest at year end 1976. In Canada, additional production was obtained from new wells drilled in the Lloydminster, Sylvan Lake and Cessford areas and from existing heavy oil sources, but these increases were essentially offset by declining productivity in a number of fields producing light and medium grade crude oil in western Canada.

The general Lloydminster heavy oil area of Alberta and Saskatchewan, where the Company has significant landholdings, represents a potentially large source of supply. The marketing of significant new volumes will require the construction of upgrading facilities to make this heavy crude acceptable to Canadian refineries. Accordingly, the Company is partici-

CRUDE OIL PRODUCTION

	1977	1976
	(Barrels per day)	
CANADA		
Alberta		
Pembina	6,881	6,973
Kaybob South Triassic	3,521	3,737
Virginia Hills	3,051	3,352
Zama	3,067	3,135
Sturgeon Lake South	2,812	2,512
Sundre	2,441	2,783
Medicine River	2,376	2,252
Bonnie Glen	1,623	1,618
Cessford	1,462	1,404
Sylvan Lake	1,471	1,229
Innisfail	1,655	1,563
Swan Hills South	1,294	1,374
Fenn Big Valley and West ..	1,184	1,165
Others	10,175	9,956
Total Alberta	43,013	43,053
British Columbia	1,619	2,249
Manitoba	13	13
Saskatchewan		
Lloydminster	1,453	988
Others	3,440	2,931
Total Saskatchewan	4,893	3,919
Total Canada	49,538	49,234
FOREIGN		
Indonesia	9,841	—
United States	59	56
Total Foreign	9,900	56
TOTAL	59,438	49,290

pating in a study designed to determine the economic viability of such facilities.

The average wellhead price received by the Company in 1977 for its crude oil production in Canada was \$9.99 per barrel, an increase of \$1.71 per barrel over 1976. The higher price reflects 1977 increases of 70 cents per barrel and \$1.00 per barrel which took effect on January 1 and July 1 respectively, supplemented by the full year impact of the crude oil price increase in July of 1976. A further increase of \$1.00 per barrel came into effect on January 1, 1978 under federal government pricing policies.

Approximately 87% of the Company's Canadian crude oil production is in Alberta, where the cash flow to the producer is higher than in other jurisdictions because provincial royalty and income tax rates are less onerous. Of this Alberta production, 22% is from freehold leases which are subject to lower royalty rates than those associated with Crown leases.

NATURAL GAS LIQUIDS

Natural gas liquids production averaged 21,450 barrels per day in 1977, an increase of approximately 3%. These liquids consist of condensate and LPG (propane and butane) which are separated from natural gas in processing plants. Condensate production, at 14,428 barrels per day, was down marginally from 1976. Production gains which resulted from the commencement of gas sales at Zama, Edson-Viking and some smaller sources were largely offset by reduced liquid content at a number of mature fields. Condensate pricing generally follows that of crude oil. A 70 cents per barrel increase on January 1, 1977 and a \$1.00 per barrel

increase on July 1, 1977, as well as the full year impact of a 1976 increase, were reflected in the average of \$10.31 per barrel received in 1977. The comparable price in 1976 was \$8.66 per barrel.

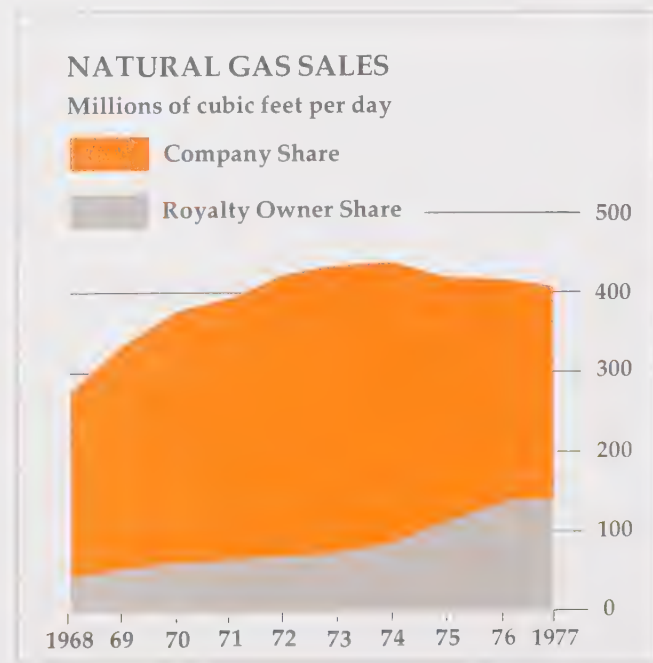
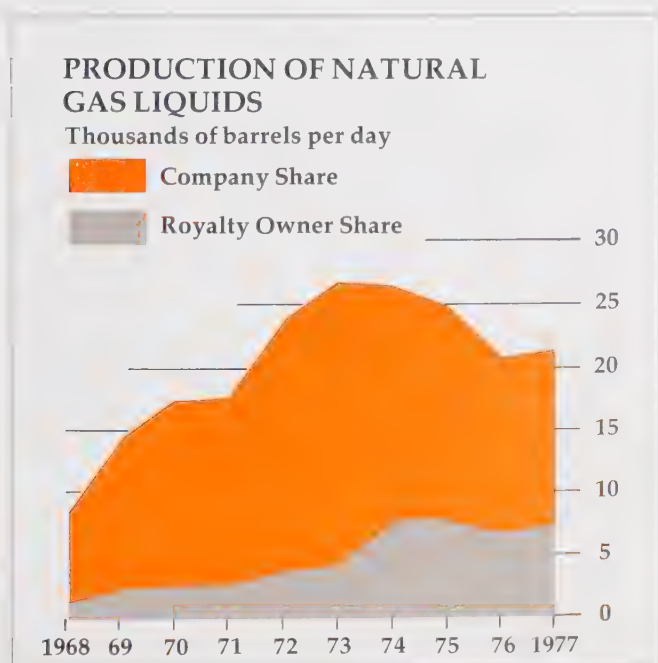
LPG production increased by 13% to 7,022 barrels per day as a result of the same factors which affected condensate and new sources of production at Paddle River and Caroline. LPG prices rose to \$7.56 per barrel, reflecting the increased demand in export markets resulting from the severity of the 1976-77 winter. Modest price increases occurred in domestic sales under the pricing controls exercised by the Alberta and federal governments.

NATURAL GAS

Natural gas sales averaged 408.7 million cubic feet per day, a moderate decline of 2.2% from the previous year. Sales from new sources at Zama, Edson-Viking, Fir and others were offset by lower demand from purchasers and declining deliverability in a variety of mature fields. The lower demand from purchasers reflects the surplus deliverability that continues to exist in Alberta.

The average wellhead price received by the Company in 1977 for all natural gas sales was \$1.28 per thousand cubic feet, 27 cents higher than in the previous year. This higher average price reflects the full year impact of 1976 increases, as well as 1977 improvements in prices received in Alberta and British Columbia and an increase in the premium realized on export shipments from Alberta.

Approximately 95% of the Company's natural gas production occurs in Alberta, where the cash flow to the



producer is greater than in other jurisdictions because provincial royalty and income tax rates are less onerous. Sales of natural gas from freehold leases, which are subject to royalty rates that are lower than those associated with Crown leases, represent 23% of the Company's total Alberta volume.

SULPHUR

Sulphur production averaged 1,410 long tons per day in 1977, an increase of 3%. Sulphur sales, however, rose by 56% to an average of 1,180 long tons per day, due to an overall increase in sulphur demand and additional sales in the North American market. This

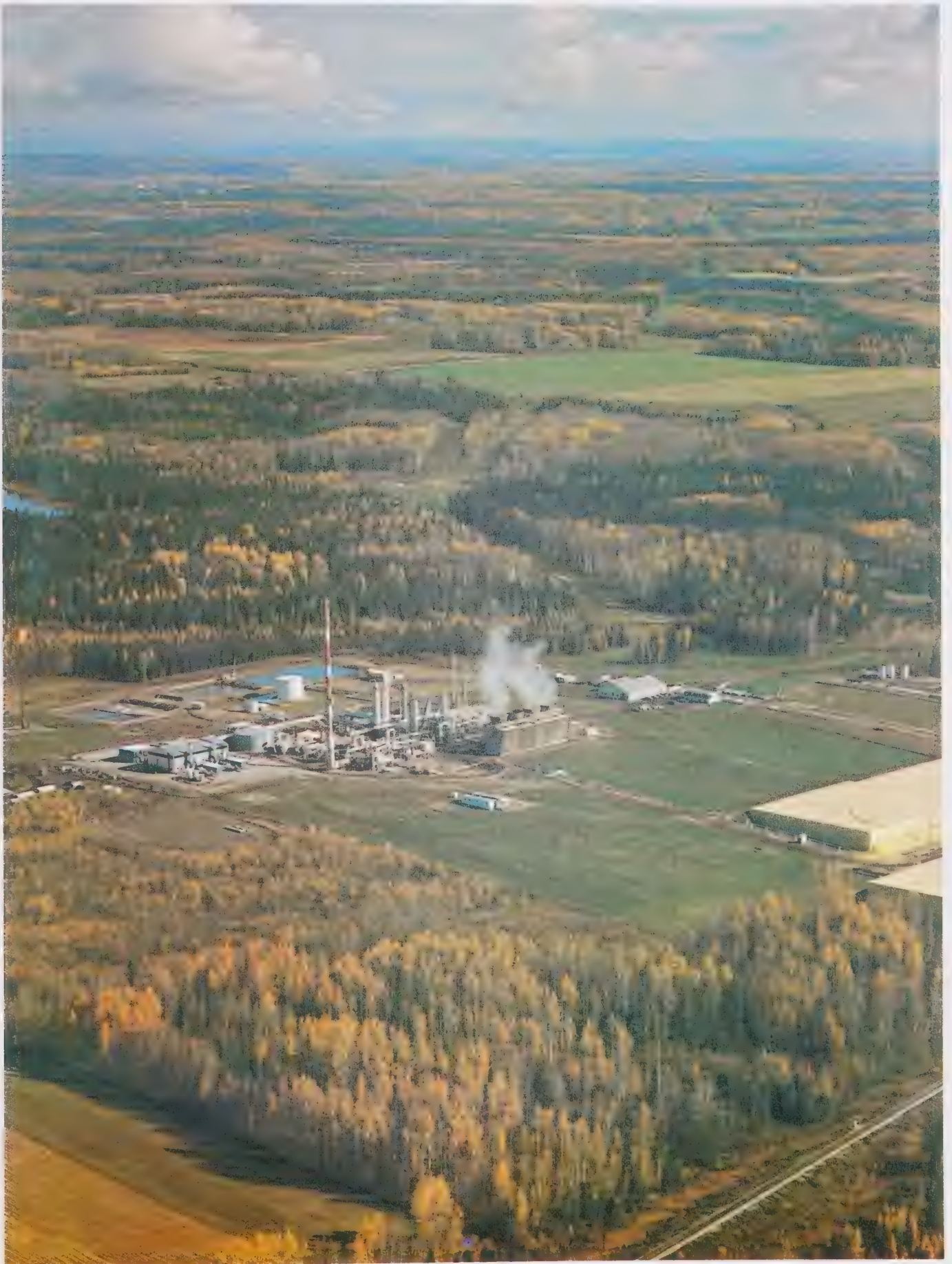
level of sales represented 84% of production compared with the 55% sold in 1976. The portion of sulphur production that is not sold currently is stored at above-ground locations. As a result of the improved sales level during 1977, these inventories grew only modestly to a total of 1.8 million long tons at year end.

Sulphur prices showed significant improvement in the last quarter of 1977 but, because of the low prices which prevailed throughout the earlier portion of the year, the net realization for all sales of sulphur averaged \$12.12 per long ton in 1977, \$1.32 lower than in the previous year.

NATURAL GAS AND ASSOCIATED PRODUCTS

	Natural Gas Sales (Millions of cubic feet per day)		Condensate Production (Barrels per day)		LPG Production (Barrels per day)		Sulphur Production (Long tons per day)	
	1977	1976	1977	1976	1977	1976	1977	1976
Alberta								
Brazeau River	48.4	53.6	560	644	—	—	26	28
Caroline	16.7	15.8	365	335	485	375	4	3
Cessford	23.3	27.4	57	69	—	—	—	—
Edson	90.0	87.5	808	721	—	—	66	67
Harmattan	5.4	5.3	550	451	391	337	3	4
Kaybob	27.6	26.5	8,588	8,605	4,494	4,145	700	675
Lone Pine Creek	20.7	22.3	577	615	—	—	85	96
Medicine Hat	10.2	10.5	—	—	—	—	—	—
Sylvan Lake	10.2	10.6	136	144	339	337	—	—
Whitecourt (Windfall)	23.4	22.3	1,518	1,802	—	—	346	327
Zama	6.8	—	238	—	108	—	23	—
Others	104.5	113.2	1,027	1,114	1,200	1,046	157	167
Total Alberta	387.2	395.0	14,424	14,500	7,017	6,240	1,410	1,367
British Columbia								
Clarke Lake	13.9	15.9	—	—	—	—	—	—
Others	6.4	5.8	2	2	—	—	—	—
Total British Columbia	20.3	21.7	2	2	—	—	—	—
Saskatchewan	1.0	1.1	—	—	—	—	—	—
Total Canada	408.5	417.8	14,426	14,502	7,017	6,240	1,410	1,367
Foreign	0.2	0.1	2	1	5	—	—	—
Total	408.7	417.9	14,428	14,503	7,022	6,240	1,410	1,367

The Company-operated Edson gas plant is one of the 67 gas processing facilities in which the Company has an interest.



RESERVES

The Company's remaining recoverable hydrocarbon reserves at December 31, 1977, as estimated by its reservoir engineering staff, are shown in the accompanying table. The estimated proved reserves include only such reserves as can reasonably be classified as proved in accordance with widely accepted American Petroleum Institute standards. Probable reserves include reserves which are substantially proved on undrilled tracts closely associated with proved reserves and for which geological control is sufficient to offer good indication of the continuity of the producing horizon. Incremental reserves from enhanced recovery techniques are included in the probable category when the required facilities are installed, and are transferred to the proved category only after the anticipated reservoir performance has been confirmed. Liquefied petroleum gases are not included in the reported reserves of natural gas liquids unless the facilities required for their extraction are in existence or are assured of construction.

The reported crude oil reserves in Canada do not include the potentially large volumes of heavy oil reserves in the Athabasca oil sands or reserves in the Arctic. The reserves in these areas will be included when sufficient development has taken place to assure their production.

The Company's Canadian crude oil reserves are estimated to total 198.0 million barrels at year end. The 1977 drilling program added 3.3 million barrels, but

these additions were substantially lower than 1977 production which amounted to 18.1 million barrels.

Foreign crude oil reserves are estimated to be 9.5 million barrels, most of which are located in Indonesia. Reserves associated with the recent Kartini discovery in Indonesia have not been included at this time pending a more conclusive evaluation of their potential. Foreign production in 1977 was 3.6 million barrels.

Remaining natural gas reserves are 3,380 billion cubic feet, virtually the same as at the previous year end. The 1977 drilling program added 223 billion cubic feet, 50% more than the 149 billion cubic feet produced during the year. This significant improvement was offset by net downward revisions of 72 billion cubic feet which occurred in the Plain Lake, Richdale, Stanmore and Pine Creek fields where production performance has been below expected levels.

Reserves of natural gas liquids totalled 75.8 million barrels, a reduction of 5.3 million barrels from the previous year end. Additions of 0.9 million barrels from the 1977 drilling program and net positive revisions of 1.7 million barrels that resulted from better reservoir performance or new extraction facilities, were insufficient to offset the annual production of 7.8 million barrels.

Sulphur reserves are estimated to total 7.3 million long tons. Production in 1977 was 0.5 million long tons and accounted for most of the change in sulphur reserves.

RESERVES

	Crude Oil (Thousands of barrels)		Natural Gas Liquids (Thousands of barrels)		Natural Gas (Billions of cubic feet)		Sulphur* (Thousands of Long tons)
	Canada	Foreign	Canada	Foreign	Canada	Foreign	Canada
December 31, 1977							
Proved	178,762	9,098	74,127	23	3,074	1	6,900
Probable	19,255	446	1,655	—	305	—	404
Total	198,017	9,544	75,782	23	3,379	1	7,304
December 31, 1976							
Proved	193,443	12,569	79,353	17	3,115	1	7,093
Probable	18,599	637	1,732	—	258	—	780
Total	212,042	13,206	81,085	17	3,373	1	7,873
Total — December 31, 1977	207,561		75,805		3,380		7,304
Total — December 31, 1976	225,248		81,102		3,374		7,873

* Sulphur reserves do not include processed sulphur inventories at above ground storage locations.

SUPPLY AND TRANSPORTATION

During 1977, the Company's pipe line division gathered and transported an average of 112,093 barrels per day of crude oil and natural gas liquids, a decrease of 1% from the prior year. This modest reduction of receipts into the gathering system resulted from production declines in oil fields and natural gas processing plants served. The portion of the total volume represented by trunk line movements into the United States averaged 60,578 barrels per day, and was 11,132 barrels per day below 1976 volumes. This curtailment is a direct result of the Canadian policy to reduce exports of crude oil and condensate to the United States.

The pace of exploratory and development drilling in the geographic area served by the pipe line system increased substantially during 1977, and as a result several new battery connections were under construction or being planned at year end. New production being connected will partially offset continuing declines in production rates from older fields. Capital expenditures for miscellaneous additions and improvements amounted to \$1.1 million in 1977, bringing the cumulative investment in pipe line facilities to \$41.8 million. At year end the system consisted of 450 miles of trunk line and 470 miles of gathering line, all within the province of Alberta.

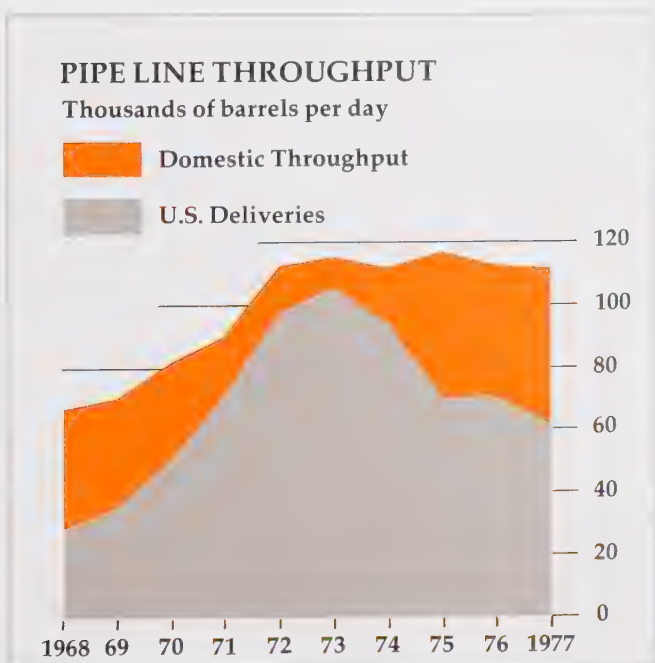
Crude oil trading operations averaged 100,961 barrels per day during 1977, up 3,410 barrels per day from the previous year. Sales of propane and butane averaged 8,703 barrels per day, a modest increase of 131 barrels per day.

In addition to its own pipe line system, the Company has a 16 $\frac{1}{3}$ % equity interest in Peace Pipe Line Ltd.

which provides gathering and trunk services for crude oil and natural gas liquids in west-central Alberta. Dividend income from this investment amounted to \$508,000.

The Company continues to support, through the direct participation of Continental Oil Company, the concept of a west coast oil port facility. Such a facility would provide economic benefits during the planning and construction stages, including use of Canadian labor, material and services. There also would be important long term advantages. The existing network of Canadian pipe lines would be utilized more fully, resulting in lower unit transportation costs for Canadian refiners, and the facility to import crude oil on the west coast would have a strategic benefit by providing Canada with a broader selection of offshore oil supplies than at present. The participants in the Kitimat pipe line proposal have reinstated an application to the National Energy Board for a permit to construct a crude oil pipe line from Kitimat, British Columbia to Edmonton, Alberta. Assuming approval of this application, Alaskan and offshore crude oil could be available at Edmonton as early as 1981. A portion of this new supply could be moved through the Company's pipe line system to the United States Rocky Mountain area in order to replace the historical export of western Canadian crude oil and equivalents which is now being phased out.

Molten sulphur is transferred to railway tank cars at the Company's loading facilities at Wessex, Alberta.



OTHER EXPLORATION AND BUSINESS DEVELOPMENT

During 1977 the Company continued its efforts to broaden its revenue base and diversify into other resource industries through the investigation of business opportunities outside of traditional oil and gas exploration and development activities. Efforts to date have been directed toward oil sands development, participation in a proposed petrochemical plant, and exploration for non-ferrous metallic minerals, uranium and coal. A comparative analysis of the expenditures incurred in these activities is shown in the following table.

	1977	1976
	(Thousands of dollars)	
Capital Expenditures		
Acquisition of coal rights	\$ 192	\$ 115
Project Expenses		
Oil sands	1,687	2,354
Minerals exploration	3,130	1,882
Coal exploration	579	181
Petrochemicals project	2	80
	5,398	4,497
Operating Expenses	936	825
Total expenses	6,334	5,322
Total Capital Expenditures and Expenses	\$6,526	\$5,437

OIL SANDS

A major portion of the 1977 oil sands expenditures was related to participation in the construction of an experimental in situ recovery project in the Cold Lake area of east-central Alberta. This pilot operation is scheduled for start up in the second quarter of 1978 and will test the effectiveness of steam stimulation and underground combustion for recovery of heavy oil. Through its participation, the Company will earn an option to acquire a 17.5% interest in the 75,000 acres of oil sands leases on which the project is located.

Late in the year arrangements were finalized for a series of laboratory tests to evaluate the effectiveness of a new heating concept for in situ recovery. These tests will be jointly funded by the Company and the Alberta Oil Sands Technology and Research Authority, an agency financed by the Government of Alberta to encourage research on new methods of developing the oil sands. The tests could lead to a field pilot project on a portion of the Company's wholly-owned 50,000 acre bituminous sands lease in the Athabasca deposit.

The Company holds a strong land position in the mineable portion of the Athabasca oil sands area through its 18.8% interest in the Athabasca Oil Sands

Project (AOP) group. A major new oil sands plant proposed for this area may involve some of the leases held by this group.

MINERALS EXPLORATION

Project expenses for minerals exploration totalled \$3.1 million in 1977. This represents a substantial increase over the \$1.9 million spent in 1976 and is attributable to the expansion of domestic activity to include uranium exploration, together with increased base metals exploration.

The 1977 metals program involved projects in Newfoundland, Ontario, British Columbia, the Northwest Territories and the Yukon Territory. Extensive airborne geophysical surveys completed during 1977 in eastern Canada have indicated sufficient encouragement to warrant land acquisition and geological ground evaluation. In the Yukon Territory and northern British Columbia, exploration was expanded through the joint venture agreement with Cyprus Anvil Mining Corporation, and a number of prospects located in 1977 will be investigated by means of prospecting and drilling programs in 1978.

In June the Company's application to resume uranium exploration was approved under the Foreign Investment Review legislation. Following this approval, exploration projects were initiated in the Great Bear Lake region of the Northwest Territories, as well as preliminary investigation of a number of prospective uranium areas in British Columbia, Ontario and Newfoundland.

At year end, holdings of mineral titles totalled 111,931 net acres, comprising 18,696 acres in British Columbia, 8,879 acres in the Yukon Territory, 67,920 acres in the Northwest Territories, 7,840 acres in Ontario and 8,596 acres in Quebec. In addition, the Company holds three prospecting permits in the Northwest Territories totalling 374,714 acres.

In the southeastern United States, exploration continued through the joint venture with a subsidiary of Continental Oil Company. To the end of 1977, a total of 15,283 acres have been accumulated over a broad area that is prospective for copper-zinc-barite mineralization.

COAL EXPLORATION

Coal exploration activities continued during 1977 with a major drilling program and an environmental overview on the Company's 8,300 acre Fall Creek property in the Alberta foothills. Recoverable reserves in this area are presently estimated at 33 million clean short tons of metallurgical grade coal. Preliminary mining feasibility studies are underway and additional work



This drilling crew is evaluating the Company's coal leases in the Fall Creek area of west-central Alberta.

is planned for 1978. Early in 1977, the Company filed coal lease applications on 19,000 acres of thermal coal prospects south of Grande Prairie in northwestern Alberta and plans for a drilling program are underway. The Company will continue to investigate prospects for preliminary exploration and evaluation, as well as maintain its efforts to purchase or farm in to coal development projects which could reach the production stage in the near term.

The Company's trunk line right-of-way is patrolled regularly by air.



PETROCHEMICALS

Since 1975, the Company has participated with the Alberta Energy Company Ltd., Mitsubishi Petrochemical Company Limited and Mitsubishi Corporation in the development of the Petrochemicals Alberta (Petalta) Project. This group is investigating the feasibility of a plant for the production of benzene and large volumes of co-products from condensate feedstock. In early 1977 the Alberta Energy Resources Conservation Board issued a favorable recommendation on Petalta's application for an industrial development permit. If the Alberta government grants the permit, important commercial and regulatory problems will have to be resolved by the participants before proceeding with engineering plans and detailed cost estimates. The Company is not firmly committed to this project, and it is expected that a decision on its commercial viability will be reached in 1978.

ENVIRONMENTAL CONSERVATION

During 1977 the Company continued its policy of conducting environmental programs designed to monitor conditions at existing facilities and assist in the planning of new projects. Detailed studies costing an aggregate of more than one-half million dollars were carried

out for planning purposes in several areas of sensitive ecology. These included the Fall Creek coal property in the Alberta foothills and Arctic drilling locations at Ellef Ringnes Island and in the Davis Strait. The Company also expanded its program of environmental inspections at its field facilities to include sound level surveys, thereby ensuring that compressor stations and large gas plants operate within acceptable sound levels.

In a continuing effort to ensure that all environmental aspects are fully considered in the preliminary stages of a new development, environmental guidelines were prepared for gas processing facilities and compressor stations. Company personnel also made a major contribution to the preparation of industry guidelines for the disposal of drilling wastes.

An awareness program for all Company employees was started so that they would be familiar with environmental needs and could assist in meeting the Company's environmental objectives. The preservation of areas having archeological and historical significance was emphasized, and during the year a number of such sites were identified and several projects were modified to avoid possible damage.

The Company continued to be represented on industry environmental committees and study groups which were involved in the review of draft regulations and environmentally related projects. Support was given to industry sponsored research programs such as the evaluation of an oil spill control method that uses air bubbles as a boom to contain and deflect oil slicks on water surfaces.

EMPLOYEES

The Company employs 1,350 people, representing a blend of technical and business professionals and skilled field operating personnel that is typical of the capital-intensive petroleum industry. The cost of salaries, wages and employee benefits totalled \$30.8 million in 1977.

Because the capabilities of employees are so vital to the continued progress of the Company, it is a major corporate goal to assist individuals in pursuing their career objectives through employee development and training programs. New employees participate in orientation sessions which give insight into Company operations, objectives and strategies. On-the-job training is carried out on a regular basis and participation in job-related courses at universities and technical schools is encouraged through the Employee Educational Refund Plan under which the Company pays 75% of the cost. A Management Development Pro-

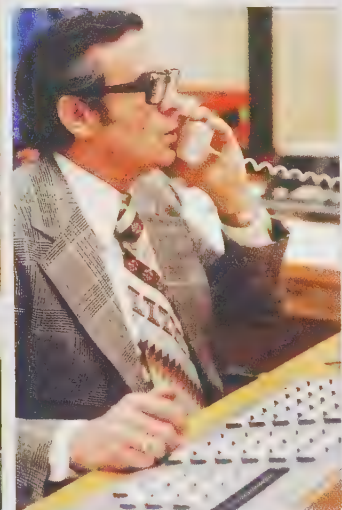
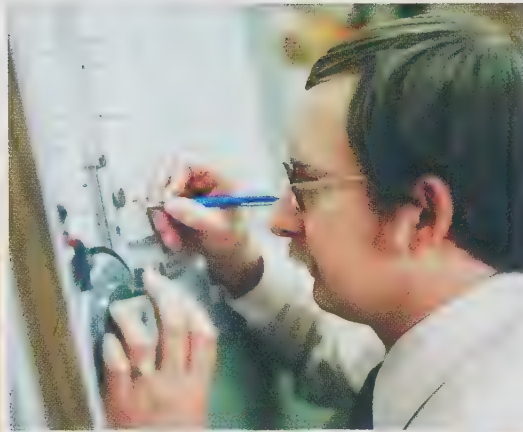
gram extends opportunities for selected employees to develop their decision-making and leadership skills at courses sponsored by various universities in Canada and the United States.

The Company continues to support higher education for young people in a variety of ways. In 1977, Company-financed university scholarships were awarded to twenty sons and daughters of employees and five scholarships and a fellowship were awarded to other deserving university and technical school students. Educational institutions were given financial assistance in the form of contributions to capital projects, special grants and donations.

During 1977, a total of 119 summer students were employed in office, field and plant locations. This program is of mutual benefit to the students and the Company as it provides the students with employment and practical training, and the Company develops a reserve of potential permanent employees.

The safety of employees and their families is an important ongoing Company objective. A defensive driving course is compulsory for all employees who drive Company vehicles and this course was made available to all Calgary personnel and their families. Continuing programs for the teaching of safety standards include an intensive first aid training course for field and plant personnel. First aid training also was provided for those Calgary personnel who form part of the head office building emergency organization. The Company has an enviable safety record in the petroleum industry. Operating groups were recognized by various industrial associations and received a total of 12 awards in 1977 for injury-free operations.

Hudson's Bay Oil and Gas continued its active program of contributions to community and charitable activities. The Company provided strong support to the United Way and other charities, while the employees contributed to various charities through the employee-operated Charitable Fund. This Fund, in addition to encouraging and providing a vehicle for employee contributions, has sponsored several very successful employee blood donor clinics. The Company is a major corporate contributor to Junior Achievement, a program which provides an effective business learning experience for high school students. In addition, many employees have made generous contributions of their time and talents as advisors in this program. For a number of years the Company has supported an international exchange program for senior university students in business related courses. Specific work assignments, structured to give practical business experience, have been given to students from such countries as Sweden, France, Holland, Belgium, Denmark and Yugoslavia.



MANAGEMENT'S ANALYSIS OF FINANCIAL RESULTS

EARNINGS

Net earnings for 1977 were \$98.9 million, a 26% increase over the 1976 level of \$78.7 million. After providing for preferred dividends, net earnings amounted to \$5.22 per common share compared to \$4.15 for 1976. Funds generated from operations increased by 35% to \$189.0 million or \$9.97 per common share.

The rate of return on total capital employed increased from 15.2% in 1976 to 17.3% in 1977 and the return on shareholders' equity increased from 25.2% to 26.5% (the basis of calculation of these returns is explained in the Notes to the Ten Year Financial Review). These gains signal a return to the upward trend in rates of return which prevailed prior to 1976. The decline in 1976 reflected the large expenditure made at year end 1975 for the purchase of natural gas reserves and exploratory acreage, of which a significant portion was in the development stage and did not generate revenues.

Dividends on common shares were 38 cents per share for the first three quarters and 40 cents per share for the final quarter, resulting in a total distribution of \$1.54 per share for 1977. Regular quarterly dividends totalling \$2.50 per share for the year were declared on preferred shares.

REVENUES

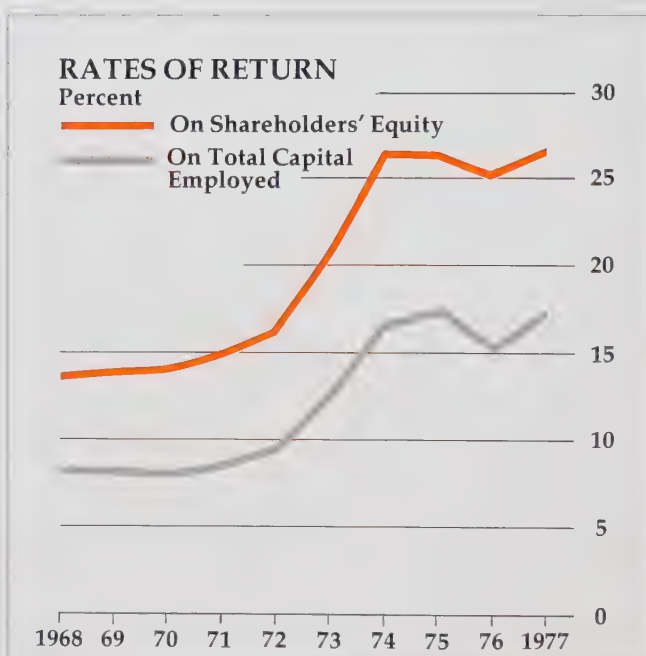
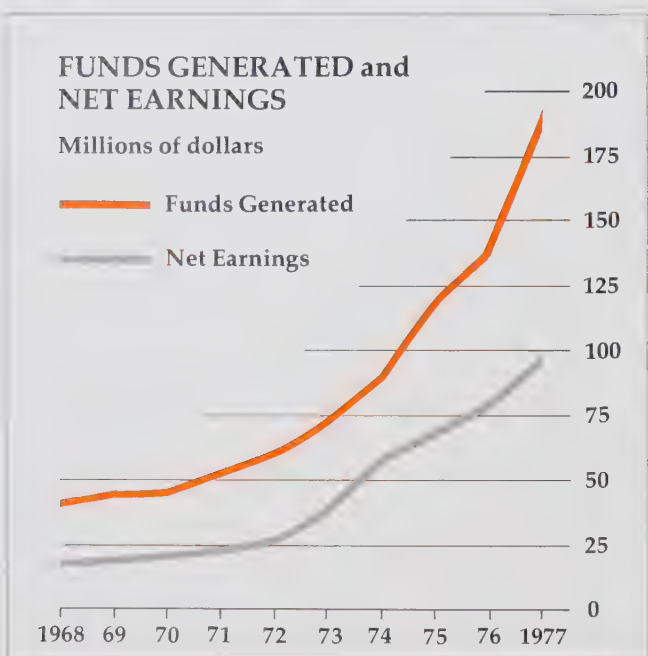
Gross domestic production revenues for the year totalled \$469.5 million, a gain of 22%, principally due



R. F. Haskayne, Executive Vice-President, is responsible for all financial and administrative services, as well as corporate planning and new business development activities.

to higher prices. The major components of production revenues and a comparison with the prior year's numbers are provided in the accompanying table. Details of the changes in production volumes and sales prices are provided in the production section of the report.

Net domestic production revenues after deducting royalties totalled \$316.2 million, a gain of 21%. Canadian royalties in 1977 averaged 33% of gross revenues compared with 32% in 1976. Net foreign production revenues amounted to \$26.8 million, an increase of



PRODUCTION REVENUES

(Thousands of dollars)

	Domestic						Foreign		Total	
	Gross Production Revenues		Royalties		Net Production Revenues		Net Production Revenues		Net Production Revenues	
	1977	1976	1977	1976	1977	1976	1977	1976	1977	1976
Crude Oil.....	\$180,147	\$148,226	\$ 58,823	\$ 47,798	\$121,324	\$100,428	\$26,677	\$204	\$148,001	\$100,632
Natural Gas Liquids.....	73,785	62,045	25,365	20,444	48,420	41,601	16	2	48,436	41,603
Natural Gas.....	193,854	158,255	68,375	55,369	125,479	102,886	91	28	125,570	102,914
Sulphur.....	5,214	3,716	785	584	4,429	3,132	—	—	4,429	3,132
Processing Non-Owned Gas.....	16,516	13,005	—	—	16,516	13,005	—	—	16,516	13,005
Total.....	<u>\$469,516</u>	<u>\$385,247</u>	<u>\$153,348</u>	<u>\$124,195</u>	<u>\$316,168</u>	<u>\$261,052</u>	<u>\$26,784</u>	<u>\$234</u>	<u>\$342,952</u>	<u>\$261,286</u>

\$26.6 million that resulted from the acquisition of an interest in the Southeast Sumatra production sharing contract in December, 1976. Operating revenues from pipe line and product trading operations, at \$18.8 million, were up 15.1%. Investment and other income of \$7.7 million was 6.6% higher than in the prior year.

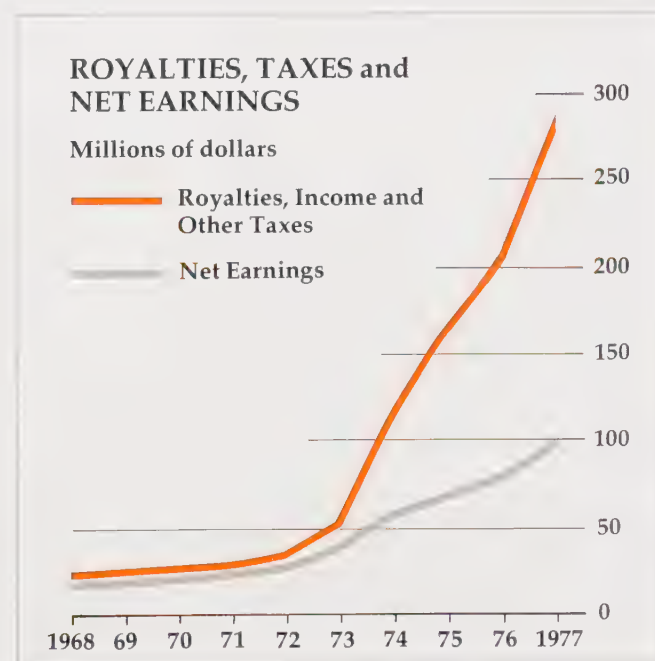
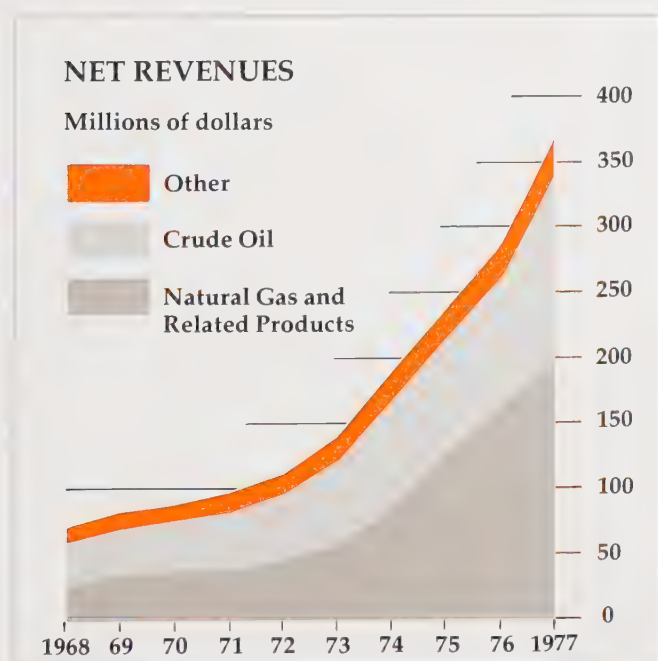
EXPENSES

Expenses, exclusive of income taxes, totalled \$172.3 million, an increase of 30%. Petroleum exploration expenses were up 31% to \$19.4 million mainly due to a higher level of foreign exploration and increased domestic geophysical activity. Dry hole and abandonment charges increased 63% to \$28.1 million reflecting the substantial increase in exploratory drilling. Other exploration and business development expenses increased 19.0% to \$6.3 million primarily because of expanded minerals exploration programs.

Petroleum production expenses advanced by 29% to \$59.3 million because of the costs associated with the new Indonesian crude oil production purchased late in 1976, the operation of additional domestic properties and the impact of inflation on Canadian operating costs. Charges for depreciation, depletion and amortization were 19.9% higher at an aggregate of \$43.3 million, largely due to the additional charges associated with the Indonesian acquisition.

INCOME TAXES

The provision for current and deferred income taxes totalled \$98.2 million, an increase of 34%. These income tax charges represented an effective rate of 49.8% of pre-tax earnings in 1977, compared with 48.2% for the previous year. Additional details on the tax calculation are provided in Note 6 to the Consolidated Financial Statements.



CAPITAL EXPENDITURES

Capital expenditures totalled \$104.9 million in 1977 compared with \$84.8 million in 1976, an increase of 24%. If the costs related to the 1976 acquisition of Indonesian producing properties are excluded from both years, expenditures in 1977 were 50% higher than in 1976, the majority of which resulted from more active drilling programs in Canada and abroad and increased outlays for Canadian undeveloped oil and gas rights.

FINANCIAL POSITION

Funds generated from operations and other internal sources in 1977 were more than sufficient to cover capital expenditures, dividends, debt retirement and all other requirements for funds. Consequently, working capital rose by \$32.0 million to \$78.0 million. Long term debt, including the portion due within one year, was reduced to \$79.8 million, principally as a result of the rapid retirement schedule of the term payables incurred for the acquisition of properties in 1975. In 1977, retained earnings increased \$69.6 million bringing shareholders' equity to a total of \$407.8 million. With these changes, long term debt represented 16.4%

of total debt and equity capital at the end of 1977 compared with 23% at the prior year end.

An option to convert each Series A Preferred Share into one common share expired on October 15, 1977. Of the 71,542 preferred shares outstanding on January 1, 1977, 56,145 were converted prior to October 15, leaving 15,397 outstanding at December 31, 1977. The resulting issue of common shares brought the total number outstanding at year end to 18,983,272.

Net production revenues showed gains over the prior year in each quarter of 1977 primarily due to higher average selling prices in Canada and new crude oil production in Indonesia. Sales volumes for natural gas liquids were up in the second and third quarters, while natural gas volumes were down in all but the third quarter.

Net earnings displayed wide differences in the quarterly comparisons with the prior year, reflecting the varying rates of revenue gains and the divergent impact of changes in the amount and timing of various expense items, particularly in dry hole and abandonment costs.

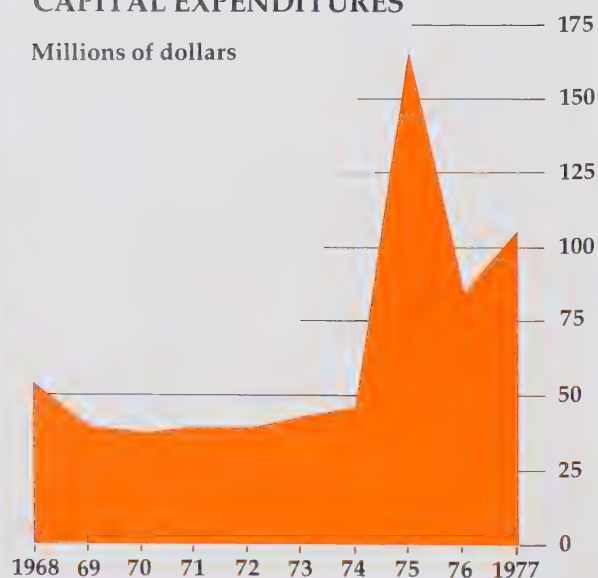
COMPARATIVE REVIEW OF QUARTERLY FINANCIAL RESULTS

(Thousands of dollars, except per share amounts)

	Net Production Revenues			Net Earnings			Net Earnings Per Share	
	1977	1976	Percent Increase	1977	1976	Percent Increase	1977	1976
First Quarter	\$ 84,704	\$ 66,909	26.6	\$26,072	\$21,165	23.2	\$1.38	\$1.12
Second Quarter	81,480	59,991	35.8	23,143	16,392	41.2	1.22	.86
Third Quarter	81,744	59,889	36.5	22,236	17,167	29.5	1.17	.90
Fourth Quarter	95,024	74,497	27.6	27,489	23,951	14.8	1.45	1.27
Total Year	<u>\$342,952</u>	<u>\$261,286</u>	<u>31.3</u>	<u>\$98,940</u>	<u>\$78,675</u>	<u>25.8</u>	<u>\$5.22</u>	<u>\$4.15</u>

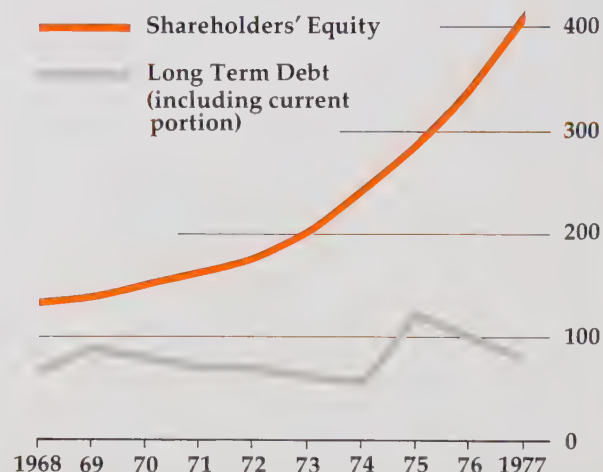
CAPITAL EXPENDITURES

Millions of dollars



SHAREHOLDERS' EQUITY and LONG TERM DEBT

Millions of dollars



SUMMARY OF ACCOUNTING POLICIES

CONSOLIDATION BASIS

The consolidated financial statements include the accounts of Hudson's Bay Oil and Gas Company Limited and its subsidiaries, all of which are wholly-owned.

FOREIGN CURRENCY TRANSLATION

Accounts of foreign operations are stated in Canadian dollars. Current assets and liabilities are translated at year end rates of exchange. Non-current assets and liabilities, and income accounts are, in general, translated at rates in effect when acquired or incurred. Gains or losses on translation of foreign currencies, though not material, are included in net earnings.

OIL AND GAS INTERESTS

The Company follows a form of the successful efforts method of accounting for its oil and gas interests.

Costs of oil and gas rights are capitalized when acquired. A regular charge is made to earnings for amortization of undeveloped oil and gas rights. The amortization rates for 1977 and 1976 were:

	1977	1976
Domestic	8%	7.5%
Foreign.....	15%	15%

When undeveloped rights are surrendered their costs are charged against the accumulated amortization. When undeveloped rights are proven to be productive the original costs are transferred to the developed oil and gas rights account and charged to earnings over the producing life of the property by annual provisions for depletion calculated on the unit of production method.

Exploration expenses, including geological and geophysical costs, are charged to earnings as incurred. All costs of drilling wells initially are capitalized. If, on completion, a well is not capable of commercial pro-

duction its cost is written off immediately. The costs of all offshore exploratory wells also are written off immediately unless they have found reserves which are expected to be developed for commercial production within a reasonable period. The costs of successful wells, other than equipment costs, are depleted on the unit of production method in the same manner as the costs of developed oil and gas rights.

OTHER INTERESTS

Costs of acquiring oil sands rights are included in, and amortized in the same manner as, undeveloped oil and gas rights. Costs of acquiring mineral and coal rights are treated in a similar manner.

Exploration and project development costs for oil sands, minerals, coal and other new business development projects are charged to earnings as incurred but when the commercial viability of a project has been established all subsequent expenditures thereon are capitalized.

PLANT AND EQUIPMENT

Plant and equipment costs are depreciated on the straight line method over the useful lives of the assets, except that certain pipe line assets are depreciated on the unit of throughput method.

The principal annual straight line rates for 1977 and 1976 were:

Lease and well equipment.....	8%
Plants and related facilities.....	5%
Major trunk pipe lines	4%

Gains or losses on disposal of plant and equipment are credited or charged to accumulated depreciation. However, on the disposal of an entire property unit, the gain or loss is credited or charged to earnings.

Renewals or replacements which improve or extend the life of existing properties are capitalized. Those of a routine nature as well as maintenance and repairs are charged to earnings.

CONSOLIDATED STATEMENTS OF EARNINGS

Years Ended December 31, 1977 and 1976

	1977	1976
	(Thousands of dollars)	
Revenues		
Net production revenues	\$342,952	\$261,286
Pipe line and product trading revenues	18,789	16,324
Investment and other income	7,692	7,218
	<u>369,433</u>	<u>284,828</u>
Expenses		
Petroleum exploration	19,397	14,857
Petroleum production	59,276	45,972
Pipe line and product trading	4,458	3,976
Other exploration and business development	6,334	5,322
General administrative	8,035	6,629
Depletion	17,101	11,847
Depreciation	15,157	13,830
Amortization of undeveloped oil and gas rights	11,083	10,463
Dry holes and abandonments	28,087	17,262
Interest (Note 4)	3,192	3,462
Other	193	(756)
	<u>172,313</u>	<u>132,864</u>
Earnings Before Income Taxes	<u>197,120</u>	<u>151,964</u>
Income Taxes (Note 6)		
Current	79,355	63,260
Deferred	18,825	10,029
	<u>98,180</u>	<u>73,289</u>
Net Earnings	<u>\$ 98,940</u>	<u>\$ 78,675</u>
Net Earnings Per Common Share (Note 10)	<u>\$ 5.22</u>	<u>\$ 4.15</u>

CONSOLIDATED STATEMENTS OF RETAINED EARNINGS

Years Ended December 31, 1977 and 1976

	1977	1976
	(Thousands of dollars)	
Retained earnings — January 1	\$241,294	\$189,867
Net earnings	98,940	78,675
	<u>340,234</u>	<u>268,542</u>
Dividends declared		
Preferred shares	136	186
Common shares	29,175	27,062
	<u>29,311</u>	<u>27,248</u>
Retained earnings — December 31	<u>\$310,923</u>	<u>\$241,294</u>

See Notes to the Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS**December 31, 1977 and 1976**

	1977	1976
	(Thousands of dollars)	
ASSETS		
Current Assets		
Cash	\$ 1,322	\$ 2,514
Short term investments at cost, which approximates market	86,947	59,647
Accounts receivable (Note 2)	134,955	111,509
Inventories		
Products at lower of average cost and net realizable value	5,662	5,792
Materials and supplies at or below average cost	4,805	4,745
	<u>233,691</u>	<u>184,207</u>
Property, Plant and Equipment — Net (Notes 1 and 3)	<u>507,384</u>	<u>474,887</u>
Investments, Advances and Other Assets		
Investments and advances at cost	2,605	2,928
Deposits, deferred charges and miscellaneous assets at cost	8,057	6,799
	<u>10,662</u>	<u>9,727</u>
	<u>\$751,737</u>	<u>\$668,821</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts payable and accrued liabilities (Note 2)	\$118,963	\$108,013
Income and other taxes payable	11,268	5,006
Dividends payable (Note 2)	7,603	7,237
Long term debt due within one year (Note 4)	17,821	17,908
	<u>155,655</u>	<u>138,164</u>
Long Term Debt (Note 4)	<u>62,019</u>	<u>81,849</u>
Deferred Revenue (Note 5)	<u>2,357</u>	<u>5,557</u>
Deferred Income Taxes (Note 6)	<u>123,953</u>	<u>105,128</u>
Shareholders' Equity		
Capital stock (Note 7)		
Authorized		
Preferred — \$50.00 par value — 915,397 shares		
(971,542 shares in 1976)		
Common — \$ 2.50 par value — 25,000,000 shares		
Issued and Outstanding		
5% Cumulative Redeemable Convertible		
Preferred Shares Series A — 15,397 shares		
(71,542 shares in 1976)	770	3,577
Common Shares — 18,983,272 (18,927,127 shares in 1976)	47,458	47,318
Contributed surplus (Note 7)	48,602	45,934
Retained earnings	310,923	241,294
	<u>407,753</u>	<u>338,123</u>
Commitments and Contingencies (Note 8)	<u>\$751,737</u>	<u>\$668,821</u>

Approved on behalf of the Board:

 Director

 Director

See Notes to the Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CHANGES IN FINANCIAL POSITION

Years Ended December 31, 1977 and 1976

	1977	1976
	(Thousands of dollars)	
Sources of Funds		
Net earnings	\$ 98,940	\$ 78,675
Charges (credits) to earnings not involving funds:		
Depreciation, depletion and amortization	43,341	36,140
Dry holes and abandonments	28,087	17,262
Deferred income taxes	18,825	10,029
Other — net	(233)	(2,032)
Funds generated from operations	188,960	140,074
Proceeds from sales of properties and investments	1,313	2,321
Total Sources of Funds	190,273	142,395
Uses of Funds		
Expenditures for property, plant and equipment	104,853	84,832
Reduction of long term debt	19,830	20,512
Dividends declared	29,311	27,248
Miscellaneous — net	4,286	(296)
Total Uses of Funds	158,280	132,296
Increase in Working Capital	\$ 31,993	\$ 10,099
Working Capital Changes		
Increase (Decrease) in Current Assets		
Cash and short term investments	\$ 26,108	\$ 7,230
Accounts receivable	23,446	16,281
Inventories	(70)	1,123
	49,484	24,634
Increase (Decrease) in Current Liabilities		
Accounts payable and accrued liabilities	10,950	18,416
Income and other taxes payable	6,262	(4,468)
Dividends payable	366	566
Long term debt due within one year	(87)	21
	17,491	14,535
Increase in Working Capital	\$ 31,993	\$ 10,099

See Notes to the Consolidated Financial Statements.

AUDITORS' REPORT TO SHAREHOLDERS

We have examined the consolidated balance sheets of Hudson's Bay Oil and Gas Company Limited as at December 31, 1977 and 1976 and the consolidated statements of earnings, retained earnings and changes in financial position for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at December 31, 1977 and 1976 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

Peax, Marwick, Mitchell & Co.

Calgary, Canada
January 27, 1978

Chartered Accountants

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Summary of Accounting Policies

The principal accounting policies followed by the Company and its subsidiaries are detailed on Page 27.

Note 2 — Amounts Owing To And From Affiliated Companies

Accounts receivable include \$26,246,000 due from Continental Oil Company and its subsidiaries and accounts payable include \$178,000 due to Continental Oil Company. The foregoing balances resulted from transactions in the normal course of business with most of the receivables relating to December sales of crude oil and natural gas liquids. Dividends payable include \$4,016,000 due to Continental Oil Company and \$1,603,000 due to Hudson's Bay Company.

Note 3 — Property, Plant and Equipment

	1977			1976		
	(Thousands of dollars)					
	Cost	Accumulated Depreciation, Depletion and Amortization	Net	Cost	Accumulated Depreciation, Depletion and Amortization	Net
Undeveloped oil and gas rights	\$141,464	\$ 33,876	\$107,588	\$132,881	\$ 24,348	\$108,533
Developed oil and gas rights	95,197	32,380	62,817	93,248	23,561	69,687
Oil and gas rights on Siebens Oil & Gas Ltd. lands (1)	1	—	1	1	—	1
Wells and related facilities	330,654	155,832 (2)	174,822	289,295	143,979 (2)	145,316
Plants and related facilities	182,257	53,800	128,457	165,908	45,918	119,990
Pipe line and product trading facilities .	42,971	15,725	27,246	42,173	14,211	27,962
Other	10,515	4,062	6,453	6,843	3,445	3,398
Total	\$803,059	\$295,675	\$507,384	\$730,349	\$255,462	\$474,887

(1) The Company has an exclusive right until December 31, 1999 to lease any or all of 1,919,000 acres of petroleum and natural gas rights owned in fee by Siebens Oil & Gas Ltd. A nominal value of \$1,000 has been assigned to these rights.

(2) Includes depletion of \$100,231,000 (1976 - \$92,665,000) and depreciation of \$55,601,000 (1976 - \$51,314,000).

Note 4 — Long Term Debt

	1977	1976
	(Thousands of dollars)	
FIRST MORTGAGE SINKING FUND BONDS		
5¾% Series C, due August 1, 1977	\$ —	\$ 87
5½% Series D, due June 15, 1983 — remaining sinking fund requirements — \$713,000 in 1979, \$1,500,000 per annum 1980 to 1982 and \$7,500,000 at maturity	12,713	14,069
7% Series E, due January 3, 1987 — remaining sinking fund requirements — \$377,000 in 1980, \$600,000 per annum 1981 to 1987	4,577	5,230
7.85% Series F, due April 15, 1994 (U.S. \$25,000,000 issued and pledged to secure payment of the 7.85% Collateral Trust Bonds due 1994)	—	—
Total	<u>17,290</u>	<u>19,386</u>
COLLATERAL TRUST BONDS		
7.85% Collateral Trust Bonds due April 15, 1994 — sinking fund requirements U.S. \$1,250,000 per annum 1979 to 1993 and U.S. \$6,250,000 at maturity. (U.S. \$25,000,000 recorded at the exchange rate in effect at date of issue. At the exchange rate prevailing on December 31, 1977, this liability would amount to \$27,360,000)	26,909	26,909
OTHER		
Non-interest bearing unsecured term payables — due in equal annual installments of approximately \$17,821,000 on June 1, 1978 and 1979	35,641	53,462
	79,840	99,757
Less amounts due within one year	<u>17,821</u>	<u>17,908</u>
Total	<u>\$62,019</u>	<u>\$81,849</u>

The aggregate payments of principal required on the foregoing long term debt in each of the next five years are as follows: \$17,821,000 in 1978; \$19,783,000 (including U.S. \$1,250,000) in 1979; \$3,127,000 (including U.S. \$1,250,000)

in 1980; \$3,350,000 (including U.S. \$1,250,000) in 1981 and 1982. Interest expense of \$3,192,000 (1976 - \$3,462,000) includes interest of \$3,209,000 (1976 - \$3,139,000) on long term debt described in the above table and other interest of \$(17,000) (1976 - \$323,000).

Note 5 — Deferred Revenue

	1977	1976
	(Thousands of dollars)	
Advances received on future natural gas sales	\$ —	\$1,749
Proceeds from sales of crude oil in excess of production entitlements under production-sharing contracts	2,357	3,808
	<u>\$2,357</u>	<u>\$5,557</u>

Note 6 — Income Taxes

The provisions made for income taxes in 1977 and 1976 exceed the amounts which would have been expected if it were assumed that the reported pre-tax earnings were subject to the Canadian Federal statutory income tax rate for the year. The principal reasons for the differences between such "expected" income tax provisions and the amounts actually provided were as follows:

	1977		1976	
	(Thousands of dollars)			
	Amount	Percent of Pre-tax Earnings	Amount	Percent of Pre-tax Earnings
Computed "expected" income taxes	\$ 90,675	46.0	\$ 69,903	46.0
Increase (Decrease) in income taxes resulting from:				
Non-deductibility of royalties and other payments to the Crown	65,918	33.5	52,346	34.4
Less related allowances and rebates:				
Federal	(43,200)	(21.9)	(35,035)	(23.1)
Provincial	(6,463)	(3.3)	(6,004)	(3.9)
	16,255	8.3	11,307	7.4
Allowance for earned depletion	(12,207)	(6.2)	(8,060)	(5.3)
Incremental provincial taxes	2,155	1.1	1,786	1.3
Incremental foreign taxes	3,964	2.0	—	—
Other — net	(2,662)	(1.4)	(1,647)	(1.2)
	7,505	3.8	3,386	2.2
Actual income tax provision	\$ 98,180	49.8	\$ 73,289	48.2

The foregoing income tax provisions include deferred income taxes of \$18,825,000 in 1977 and \$10,029,000 in 1976. The amount of deferred taxes, by the principal items which gave rise to such taxes, was as follows:

	1977	1976
	(Thousands of dollars)	
Lease acquisition costs	\$ 4,088	\$ 5,590
Depreciable facilities	5,069	5,930
Drilling and exploration costs	8,876	(2,052)
Other — net	792	561
Deferred income taxes	<u>\$18,825</u>	<u>\$10,029</u>

The deferred income taxes arose because the rates of write-off of certain costs for financial reporting purposes differed from the following rates of write-off permitted for tax purposes:

- (i) 100% of expenditures for "Canadian exploration expense", which includes all geological and geophysical expenses, dry holes and abandonments, and costs of drilling wells which resulted in the discovery of new pools of hydrocarbons or which are not expected to come into production in commercial quantities within one year of the date of completion;
- (ii) 30% of the unclaimed balance of expenditures for "Canadian development expense" which includes costs of drilling all other wells and the acquisition costs of petroleum and natural gas rights;
- (iii) the unclaimed balance of expenditures for "foreign exploration and development expense" on operations conducted directly by the Company in foreign countries to the extent of foreign production income or 10% of such unclaimed balance, whichever is greater; and
- (iv) varying rates of "capital cost allowance" on depreciable assets.

In determining the current income taxes payable in 1977 the Company deducted the maximum amount of all costs that are claimable plus all the depletion "earned" and a 25% resource allowance in lieu of royalties and other non-deductible payments to the Crown. Foreign incorporated subsidiaries of the Company did not generate any taxable income in 1977 or 1976 and in each case deductible costs will be carried forward for application against future taxable income of these subsidiaries.

Note 7 — Capital Stock

The 5% Cumulative Redeemable Convertible Preferred Shares Series A are redeemable at the option of the Company at \$51.00 per share. The option of preferred shareholders to convert each preferred share into one common share expired on October 15, 1977. During the year 56,145 common shares (1976 - 4,728 common shares) were issued on conversion of the same number of preferred shares. The excess of the par value of the preferred shares over the par value of the common shares into which they were converted amounted to \$2,668,000 (1976 - \$224,000) and was credited to Contributed Surplus.

Note 8 — Commitments and Contingencies

The Company in the normal course of business has entered into a long term agreement to lease office space in Calgary. This lease, which will expire in 1996 if the ten year renewal option is not exercised, has a minimum rental payable of \$1,744,000 for 1978; \$1,752,000 for 1979; \$1,757,000 for 1980; \$1,794,000 for 1981 and \$1,830,000 for 1982. The Province of Saskatchewan has introduced a bill to tax profits derived from the production of oil in the province from January 1, 1974. The rate of tax has not been set and accordingly the Company cannot determine its liability for tax. The Company expects, however, that its liability will be substantially offset by amounts already paid to the Province under legislation which recently has been declared ultra-vires.

Note 9 — Federal Anti-Inflation Legislation

The federal program of restraint on prices and profits, dividends and compensation continued throughout 1977. Most of the Company's 1977 revenues were derived from the sale of crude oil, natural gas liquids and natural gas, the prices of which are already subject to government controls and therefore are exempt from the anti-inflation guidelines. In accordance with the directives of the Anti-Inflation Board, the remainder of the Company's revenues are considered to be exempt from the guidelines. The Company is, however, subject to and in compliance with the guidelines for compensation and dividends.

Note 10 — Net Earnings Per Common Share

Net earnings per common share are based on the monthly weighted average number of common shares outstanding and are after dividend requirements on the 5% Cumulative Redeemable Convertible Preferred Shares Series A. Unaudited quarterly earnings per share information is included in the table on Page 26.

Note 11 — Remuneration of Directors and Officers

Aggregate direct remuneration paid or payable in 1977 to the Company's directors and officers amounted to \$60,000 and \$880,000 respectively (1976 - \$62,000 and \$804,000). During the year there was a total of 15 directors and 13 officers of whom four served in both capacities. No remuneration was paid or payable to directors or officers of the Company by any of its subsidiaries.

Note 12 — Retirement Plan

The Company has a contributory retirement plan which is available to all permanent employees. At December 31, 1976 the date of the last actuarial evaluation, unfunded liabilities amounted to \$832,000, which are being amortized over appropriate periods.

Note 13 — Securities and Exchange Commission Reporting Requirements

In accordance with a requirement of the United States Securities and Exchange Commission (S.E.C.) the Company has provided certain disclosures in Form 10-K with respect to the replacement cost of a small portion of its assets and the related effect on net earnings.

The S.E.C. also has adopted a standard issued by the Financial Accounting Standards Board (F.A.S.B.) on reporting by oil and gas producing companies which requires the use of successful efforts accounting. The Company has always used a form of successful efforts accounting (see Note 1) which differs slightly from the F.A.S.B. method. If the F.A.S.B. method was adopted, it would not have a material effect on net earnings, shareholders' equity, debt covenants or dividend policies.

TEN YEAR FINANCIAL REVIEW (1)

	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968
Consolidated Statement of Earnings										
Net Production Revenues										
Canada — Crude Oil	\$121,324	100,428	91,785	85,333	66,568	52,340	47,501	40,416	36,580	36,671
— Natural Gas and Associated Products	\$194,844	160,624	123,184	83,452	55,878	43,573	36,850	35,346	33,266	24,320
Foreign	\$ 26,784	234	—	—	—	—	—	—	—	—
Pipe Line and Product Trading Revenues	\$ 18,789	16,324	13,678	14,415	13,971	12,720	10,956	8,428	6,649	5,893
Investment and Other Income	\$ 7,692	7,218	6,741	6,895	3,457	2,197	2,665	4,154	4,867	3,887
	\$369,433	284,828	235,388	190,095	139,874	110,830	97,972	88,344	81,362	70,771
Expenses										
Petroleum Exploration	\$ 19,397	14,857	13,724	13,100	10,576	9,410	8,526	7,981	8,890	8,257
Petroleum Production	\$ 59,276	45,972	38,642	32,148	26,708	21,336	18,880	15,629	13,416	11,062
Other Operating and Administrative	\$ 19,020	15,171	11,120	8,367	7,308	6,784	6,736	5,488	4,817	3,800
Depletion, Depreciation, Amortization & Dry Holes & Abandonments	\$ 71,428	53,402	34,805	30,077	29,120	26,628	23,338	21,484	19,261	16,783
Interest	\$ 3,192	3,462	3,519	3,674	3,924	4,128	4,539	5,478	5,588	4,059
	\$172,313	132,864	101,810	87,366	77,636	68,286	62,019	56,060	51,972	43,961
Net Earnings Before Income Taxes	\$197,120	151,964	133,578	102,729	62,238	42,544	35,953	32,284	29,390	26,810
Income Taxes — Current	\$ 79,355	63,260	47,783	40,825	16,122	9,242	7,473	7,854	2,360	20
— Deferred	\$ 18,825	10,029	16,046	3,552	6,746	5,553	5,325	4,260	8,147	9,389
Net Earnings	\$ 98,940	78,675	69,749	58,352	39,370	27,749	23,155	20,170	18,883	17,401
Per Common Share	\$ 5.22	4.15	3.68	3.07	2.07	1.44	1.18	1.02	0.95	0.87
Funds Generated from Operations	\$188,960	140,074	120,168	91,502	74,623	59,811	51,180	44,607	44,794	42,751
Per Common Share	\$ 9.97	7.39	6.34	4.83	3.93	3.18	2.72	2.36	2.37	2.25
Rate of Return										
On Total Capital Employed (4)	17.3%	15.2%	17.4%	16.7%	12.7%	9.8%	8.7%	8.1%	8.3%	8.3%
On Shareholders' Equity (5)	26.5%	25.2%	26.4%	26.4%	20.9%	16.5%	15.0%	14.0%	14.0%	13.7%
Major Balance Sheet Items										
Working Capital	\$ 78,036	46,043	35,944	55,448	34,023	23,434	15,778	19,486	25,408	3,824
Property, Plant and Equipment — Net	\$507,384	474,887	444,736	314,241	300,093	288,063	279,462	265,103	251,019	231,828
Long Term Debt	\$ 62,019	81,849	102,361	52,003	57,983	66,648	68,417	75,334	83,061	62,593
Deferred Income Taxes	\$123,953	105,128	95,099	79,053	75,501	68,755	63,429	58,104	53,844	45,697
Shareholders' Equity	\$407,753	338,123	286,696	240,792	200,608	175,622	160,184	148,590	139,067	130,831
Capital Expenditures										
Petroleum Exploration and Development										
Undeveloped Oil and Gas Rights — Canada ..	\$ 13,135	8,083	57,930	7,899	7,176	6,439	3,920	5,547	14,171	5,178
— Foreign ..	\$ 510	269	3,232	5,067	—	—	—	—	—	—
Exploratory Drilling — Canada	\$ 24,742	14,010	9,901	8,641	6,789	8,117	5,182	5,286	4,031	5,303
— Foreign	\$ 11,946	7,669	4,155	603	—	—	—	—	—	—
Total Petroleum Exploration Capital Expenditures	\$ 50,333	30,031	75,218	22,210	13,965	14,556	9,102	10,833	18,202	10,481
Developed Oil and Gas Rights — Canada	\$ 6	(1,831)	43,865	—	—	31	147	111	—	176
— Foreign	\$ (1,406)	14,025	—	—	—	—	—	—	—	—
Development Drilling and Production Facilities — Canada	\$ 31,635	21,385	20,561	10,219	16,931	12,875	10,436	8,821	10,893	10,622
— Foreign	\$ 2,453	371	5	—	—	—	—	—	—	—
Plants and Related Facilities	\$ 16,462	18,579	21,720	10,976	4,718	9,554	15,524	15,462	8,663	26,428
Total Petroleum Capital Expenditures	\$ 99,483	82,560	161,369(3)	43,405	35,614	37,016	35,209	35,227	37,758	47,707
Other Capital Expenditures	\$ 5,370	2,272	5,049	2,280	7,345	2,321	4,150	2,137	1,921	4,649
Total Capital Expenditures	\$104,853	84,832	166,418	45,685	42,959	39,337	39,359	37,364	39,679	52,356
Exploration Expenses										
Petroleum — Canada	\$ 15,382	12,868	11,723	12,395	10,214	9,410	8,526	7,981	8,890	8,257
— Foreign	\$ 4,015	1,989	2,001	705	362	—	—	—	—	—
Total Petroleum Expenses	\$ 19,397	14,857	13,724	13,100	10,576	9,410	8,526	7,981	8,890	8,257
Other Exploration & Business Development	\$ 6,334	5,322	1,924	877	774	279	446	340	548	82
Total Exploration Expenses	\$ 25,731	20,179	15,648	13,977	11,350	9,689	8,972	8,321	9,438	8,339
Total Capital Expenditures & Exploration Expenses										
Petroleum	\$118,880	97,417	175,093(3)	56,505	46,190	46,426	43,735	43,208	46,648	55,964
Other	\$ 11,704	7,594	6,973	3,157	8,119	2,600	4,596	2,477	2,469	4,731
Total	\$130,584	105,011	182,066	59,662	54,309	49,026	48,331	45,685	49,117	60,695
Shareholders and Dividends										
Preferred Shares										
Number of Shares Outstanding (thousands)	15	72	76	77	77	77	600	600	600	600
Number of Shareholders	167	568	589	581	599	640	2,593	2,625	2,677	2,851
Market Price Per Share — High	\$ 47.25	40.50	40.00	51.00	63.00	60.00	62.00	62.50	60.00	63.50
— Low	\$ 27.75	31.50	28.50	27.00	50.00	47.50	49.50	43.00	50.75	51.25
Dividends Declared Per Share — in equal quarterly amounts totalling	\$ 2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Common Shares										
Number of Shares Outstanding (thousands)	18,983	18,927	18,922	18,922	18,922	18,922	18,294	18,294	18,294	18,294
Number of Shareholders	8,403	8,578	9,079	9,363	9,803	10,135	9,717	9,751	8,688	8,864
Market Price Per Share — High	\$ 48.75	41.00	36.50	47.75	57.50	57.50	49.50	51.00	45.00	46.00
— Low	\$ 33.12	31.50	17.00	15.50	40.25	38.25	37.25	30.87	33.00	31.50
Dividends Declared Per Share										
First Quarter	\$ 0.38	0.35	0.25	—	—	—	—	—	—	—
Second Quarter (First Half)	\$ 0.38	0.35	0.30	0.45	0.35	0.30	0.25	0.25	0.25	0.25
Third Quarter	\$ 0.38	0.35	0.35	—	—	—	—	—	—	—
Fourth Quarter (Second Half)	\$ 0.40	0.38	0.35	0.50	0.40	0.30	0.30	0.25	0.25	0.25
Total	\$ 1.54	1.43	1.25	0.95	0.75	0.60	0.55	0.50	0.50	0.50

TEN YEAR OPERATING REVIEW (1)

	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968
Production Volumes Before Royalty (Barrels per day)										
Crude Oil — Canada	49,538	49,234	53,012	62,295	67,410	62,586	57,669	53,727	49,973	49,943
— Foreign	9,900	56	—	—	—	—	—	—	—	—
Total	59,438	49,290	53,012	62,295	67,410	62,586	57,669	53,727	49,973	49,943
Condensate	14,428	14,503	17,820	19,556	20,282	19,123	14,207	14,189	12,017	7,277
LPG	7,022	6,240	7,131	6,896	6,588	4,886	3,606	3,243	2,258	1,161
Total Crude Oil and Natural Gas Liquids										
Before Royalty	80,888	70,033	77,963	88,747	94,280	86,595	75,482	71,159	64,248	58,381
After Royalty	53,983	47,272	53,013	61,718	77,854	73,279	63,809	60,168	54,426	49,515
Natural Gas Sales (Millions of cubic feet per day)										
Before Royalty	408.7	417.9	419.0	436.6	434.7	421.4	392.8	378.3	336.6	278.7
After Royalty	267.8	278.5	305.4	348.8	363.8	352.3	328.8	317.0	281.7	233.3
Sulphur (Long tons per day)										
Production — Before Royalty	1,410	1,367	1,585	1,769	1,943	1,930	1,485	1,482	1,126	590
— After Royalty	1,180	1,141	1,325	1,474	1,627	1,615	1,243	1,246	955	500
Sales — Before Royalty	1,180	757	856	1,152	1,195	1,018	973	1,090	896	479
— After Royalty	1,001	637	719	967	1,000	852	814	917	760	406
Pipe Line										
Throughput (Barrels per day)	112,093	113,191	116,595	111,969	114,524	112,799	90,463	81,930	70,135	66,578
Miles of Trunk Lines	450	450	450	450	450	420	420	420	420	420
Miles of Gathering Facilities	470	465	456	459	456	431	450	450	425	423
Well Data										
Net Exploratory Wells Completed										
Canada — Oil	12.5	2.9	2.5	5.6	7.7	6.1	5.5	2.7	4.0	4.8
— Gas	19.7	15.2	11.2	16.5	16.9	15.3	3.7	8.1	4.9	3.9
— Dry	40.4	20.1	24.7	17.5	35.5	29.2	23.0	24.0	43.1	29.5
Total	72.6	38.2	38.4	39.6	60.1	50.6	32.2	34.8	52.0	38.2
Foreign — Oil	0.2	—	0.5	—	—	—	—	—	—	—
— Gas	0.1	0.2	0.5	—	—	—	—	—	—	—
— Dry	2.5	2.5	1.9	—	—	—	—	—	—	—
Total	2.8	2.7	2.9	—	—	—	—	—	—	—
Net Development Wells Completed										
Canada — Oil	64.4	43.5	28.9	20.3	54.0	72.6	21.8	23.8	31.5	19.3
— Gas	128.0	79.0	46.7	49.1	64.0	44.7	10.6	13.4	19.8	16.2
— Dry	39.0	25.2	10.6	9.7	13.4	14.2	9.5	12.3	6.7	6.9
Total	231.4	147.7	86.2	79.1	131.4	131.5	41.9	49.5	58.0	42.4
Foreign — Oil	2.5	1.5	—	—	—	—	—	—	—	—
— Gas	—	0.1	—	—	—	—	—	—	—	—
— Dry	0.5	—	—	—	—	—	—	—	—	—
Total	3.0	1.6	—	—	—	—	—	—	—	—
Gross Wells Completed										
Canada	631	383	281	303	501	381	199	225	244	166
Foreign	40	17	9	—	—	—	—	—	—	—
Total	671	400	290	303	501	381	199	225	244	166
Oil and Gas Rights — Net (Thousands of acres)										
Canada — Undeveloped	14,453	15,485	17,691	21,477	24,068	26,805	28,113	22,157	22,319	20,204
— Developed	864	768	729	638	596	570	544	534	512	472
Total	15,317	16,253	18,420	22,115	24,664	27,375	28,657	22,691	22,831	20,676
Foreign — Undeveloped	5,949	2,011	563	139	—	—	—	—	—	—
— Developed	2	2	—	—	—	—	—	—	—	—
Total	5,951	2,013	563	139	—	—	—	—	—	—
Reserves (2)										
Crude Oil (Millions of barrels)										
Canada	198.0	212.0	243.1	270.3	273.3	310.1	330.4	332.4	335.1	337.3
Foreign	9.5	13.2	—	—	—	—	—	—	—	—
Total	207.5	225.2	243.1	270.3	273.3	310.1	330.4	332.4	335.1	337.3
Natural Gas Liquids (Millions of barrels)										
Canada	75.8	81.1	97.3	105.5	116.2	126.6	124.7	126.8	124.9	103.8
Natural Gas (Billions of cubic feet)										
Canada	3,379	3,373	3,670	3,660	3,766	3,822	3,781	3,821	3,785	3,728
Foreign	1	1	—	—	—	—	—	—	—	—
Total	3,380	3,374	3,670	3,660	3,766	3,822	3,781	3,821	3,785	3,728
Sulphur (Thousands of long tons)										
Canada	7,304	7,873	9,190	9,933	10,778	10,924	11,741	11,744	11,540	11,207
Employees										
Number of Employees	1,350	1,280	1,203	1,152	1,068	1,018	1,076	1,043	938	849
Salaries, Wages and Benefits	\$30,808	26,830	22,566	18,074	14,778	13,066	12,375	10,763	9,096	7,549

NOTES:

- (1) All dollar amounts are in thousands except for per share figures.
- (2) Including royalty volumes and the participation interests of host governments.
- (3) Includes a \$98.3 million purchase of undeveloped and developed properties and related facilities.
- (4) Expresses net earnings plus the after-tax cost of interest on long term debt, as a percentage of average total assets less current liabilities other than the current portion of long term debt.
- (5) Expresses net earnings as a percentage of average shareholders' equity.

Board of Directors At February 10, 1978

John E. Kircher	Stamford, Connecticut Chairman of the Board of Directors of the Company Deputy Chairman of the Board of Directors of Continental Oil Company
Ralph E. Bailey	Stamford, Connecticut President and Director of Continental Oil Company
Ian A. Barclay	Vancouver, British Columbia Chairman of the Board of Directors and Chief Executive Officer of British Columbia Forest Products Limited Director of Hudson's Bay Company
Howard W. Blauvelt	Stamford, Connecticut Chairman of the Board of Directors and Chief Executive Officer of Continental Oil Company
George H. Blumenauer	Hamilton, Ontario Chairman of the Board of Directors and President of Otis Elevator Company Limited
Richard F. Haskayne	Calgary, Alberta Executive Vice-President of the Company
Walter F. Light	Montreal, Quebec President and Director of Northern Telecom Limited
Gerald J. Maier	Calgary, Alberta Executive Vice-President of the Company
Donald S. McGiverin	Toronto, Ontario Vice-Chairman of the Board of Directors of the Company President and Director of Hudson's Bay Company
Michael B. Morris	Stamford, Connecticut Executive Vice President — Exploration and Director of Continental Oil Company
Stanley G. Olson	Calgary, Alberta President and Chief Executive Officer of the Company
George T. Richardson	Winnipeg, Manitoba President of James Richardson & Sons, Limited Governor of Hudson's Bay Company
Samuel Schwartz	Stamford, Connecticut Senior Vice President — Corporate Planning of Continental Oil Company

Committees of the Board of Directors At February 10, 1978

Executive Committee:

Messrs. Olson (Chairman), Blauvelt, Kircher, McGiverin

Committee on Audits and Financial Controls:

Messrs. Schwartz (Chairman), Blumenauer, McGiverin

Retirement Board:

Messrs. Blumenauer (Chairman), Burgis, Light, McGiverin, Olson

Compensation Committee:

Messrs. McGiverin (Chairman), Blauvelt, Kircher, Light

Officers and Senior Management At February 10, 1978

S. G. Olson	President	P. T. Black	General Manager, Minerals Exploration
R. F. Haskayne	Executive Vice-President	O. Humeniuk	Treasurer
G. J. Maier	Executive Vice-President	A. Masuda	General Manager, Production
K. H. Burgis	Senior Vice-President	W. E. Selby	Corporate Secretary
R. J. Hamilton	Vice-President, Exploration	A. R. Travers	Controller
K. W. Lloyd	Vice-President, Supply and Transportation	F. Callaway	Manager, Corporate Planning
R. Sedgewick	Vice-President, Personnel and Corporate Services	J. H. McKibbin	Manager, Oil Sands
W. D. Storey	Vice-President, Production	K. A. McNeill	Manager, Employee Relations
L. K. O'Bert	President, Hudbay Oil International Ltd.	G. Redlich	Manager, Business Development
L. B. Bannicke	General Counsel and Assistant Secretary	D. L. Stauff	Manager, Information Systems

Hudson's Bay Oil and Gas Company Limited
Incorporated in 1926 under the Laws of Canada

Head Office

700 Second Street South West, Calgary, Alberta, Canada

Principal Subsidiary Companies (All Wholly-Owned)

Aurora Pipe Line Company
Hudbay Exploration, Inc.
Hudbay Mining Ltd.
Hudbay Oil (Australia) Ltd.
Hudbay Oil (Indonesia) Ltd.
Hudbay Oil International Ltd.

Transfer Agents

Common Shares
Montreal Trust Company,
Calgary, Montreal, Regina, Toronto, Vancouver and Winnipeg

Morgan Guaranty Trust Company of New York,
New York

Preferred Shares
Montreal Trust Company,
Calgary, Montreal, Regina, Toronto, Vancouver and Winnipeg

Stock Exchange Listings

Common Share Symbol: HBO
Toronto Stock Exchange
Montreal Stock Exchange
American Stock Exchange

Preferred Share Symbol: HBO.PR.A
Toronto Stock Exchange
Montreal Stock Exchange

Auditors

Peat, Marwick, Mitchell & Co., Calgary

Form 10-K

Copies of this report and the Annual Report on Form 10-K filed with the Securities and Exchange Commission of the United States of America are available free of charge by writing to the Corporate Secretary of the Company, 700 Second Street South West, Calgary, Alberta, Canada T2P 0X5.

